



MAYOR AND COUNCIL AGENDA

NO. *10* DEPT.: Community Planning and Development Services
STAFF CONTACT: Somer Cross, Planner II

DATE PREPARED: 9/1/05
FOR MEETING OF: 9/19/05

SUBJECT: Discussion of urban design and related considerations to be incorporated into the Zoning Ordinance revision.

RECOMMENDATION: Consider the background information presented in the urban design white paper and general recommendations of staff.

DISCUSSION:

The attached urban design paper was created to provide the Mayor and Council with background information. Specifically, the paper details the existing City policies and current nationwide theories on urban design and provides some examples of what other communities are doing to implement these policies. Tonight's presentation is merely an introduction to the issues and considerations of urban design. We are seeking general guidance from the Mayor and Council on whether to go forward with additional recommendations.

The policy issues of urban design to be incorporated into the comprehensive Zoning Ordinance revision will be addressed at the following meetings.

1. **September 27** – Introductory white papers on competing values and optional methods will be presented to the Mayor and Council. This meeting will provide background information on these issues. No particular policy decisions will be made at this meeting.
2. **October 17** - A follow-up meeting of the Mayor and Council on urban design and competing values is scheduled to discuss the particular implementation techniques applicable to the City of Rockville. At this meeting the policy direction and trade-offs associated with urban design, and the zoning revision, in general, will be discussed.
3. **November 21** – A follow-up meeting is scheduled to address optional methods of development. This meeting will determine which optional methods should be included in the revision, based on the policy direction from the urban design and competing values discussions.
4. **December 5 (tentative)** – A presentation before the Mayor and Council will provide a comprehensive review on all the major policy decisions addressed in the white paper presentations.


Individual neighborhood plans have recommended a number of piecemeal changes to the Zoning Ordinance to reflect their individual goals. Many of these changes have been adopted. While this style of ad hoc regulating has met the priorities of these plans, the city needs to consider their overarching goals and policies. Though these overarching policies were addressed in the Master Plan, this white paper will emphasize the goals relating only to urban design. A focus on the urban design goals of the City will guide the Zoning Ordinance to provide regulations that will develop the kind of livable community the City wants to have.

Since the last comprehensive zoning revision, over thirty years ago, the ideas and policies of urban design have changed. Older communities, like Rockville, have built-out in the past decades. The regulations associated with a built-out community are different from those that may apply to a newly built community. For example, form is more prominent in a built-out community regulation than

function of a building. In a reaction to sprawl, the rising cost of gasoline, and the concern for the preservation of greenspace, Zoning Ordinances have begun to reflect new trends. Instead of designing primarily for the automobile, communities have started to regulate at a pedestrian / walkable / human-scale level. Before embarking on the drafting stage of the zoning revision, a review of the current trends and options available will help to focus the direction the Ordinance will take.

Next Steps: Consider the background information and general recommendations of staff presented in the attached white paper. More particular recommendations and a policy discussion will be addressed in a follow-up meeting of Mayor and Council on October 17.

PREPARED BY:



Somer Cross, Planner II

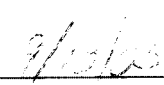
APPROVED BY:


Jim Wasilak, Chief of Planning

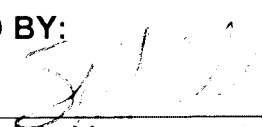
9.12.05
Date


APPROVED BY:


Arthur D. Chambers, AICP, Director, CPDS


Date

APPROVED BY:


Scott Ullery, City Manager


Date

LIST OF ATTACHMENTS:

1. Urban Design White Paper

Urban Design



White Paper Discussion
City of Rockville, Maryland

September 19, 2005



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**City of Rockville
Zoning Ordinance Revision
Issue Paper**

Urban Design

PART ONE INTRODUCTION

I. INTRODUCTION

Urban design is the visual motif of the city, or a particular part of the city, to achieve a high quality of life for the public. Livability is the goal of urban design. The regulations to promote quality design consider how buildings and the spaces between them (public spaces) interact. Design components, which are regulated in an urban design code, are building bulk, use, height, and facades as well as street patterns, streetscape elements, and natural features. These components are the building blocks to a community's character and unique sense of place.

Because a great portion of the city is already built out, urban design regulations will become even more prominent in determining the pattern of future development with regard to demolition and reconstruction, infill development, and annexations. Existing plans for the City of Rockville support the implementation of some urban design concepts in the zoning revision. A list of these plan recommendations, as well as examples of existing urban design programs at work in the City, are given below. This issue paper will also provide alternative implementation techniques and recommend the incorporation of certain regulations in the zoning revision.

II. PRINCIPLES OF URBAN DESIGN

The desire of urban design is to create a sense of place that provides a high quality public realm, recognizes and builds off of existing neighborhood characteristics, and allows for a contextual response to neighborhood development. There are six defined objectives in regulating for urban design. Particular regulations to serve these goals are discussed in Part II of this paper.

1. **Provide for a Variety of Uses.** In an effort to create pedestrian-friendly atmospheres, urban design codes allow a variety of uses within a neighborhood in order to create vitality and to bring many activities of daily living within walking distance of homes. Development regulations make it possible to walk to parks, shops, and schools. Designated mixed-use districts and neighborhoods are often considered the solution.
2. **Provide for Mixed Residential Density and Housing Types.** An important aspect of form-based zones is to ensure that there are a variety of housing types

for all income levels. Mixed housing types allow as a right, or require with conditions, a harmonious design in providing a mix.

3. **Stimulate Infill Activity.** While Rockville does not have a large amount of empty infill lots available, future infill development will include redevelopment of existing lots. Urban design codes are designed to stimulate infill and rehabilitation activity. To achieve this goal, some communities adjust minimum lot-size and setback requirements to reflect the smallest practical lots in the neighborhood; some expedite development review; and others minimize parking requirements and provide transportation alternatives to single passenger cars. Allowing a higher density is also a common implementation tool for this goal.
4. **Develop Contextual Design Standards.** Contextual design standards ensure that new development responds to the traditional architectural styles of the city or region. Illustrated design standards ensure that design is sensitive to the regional context and the site's features and immediate surroundings, yet allows for distinctive development. Building types and basic architectural elements should be addressed. Mandating for specific styles or details, however, can be overly burdensome and may result in monotonous development.
5. **Create Walkable Centers.** Form based regulations strive to create compact, walkable centers and neighborhoods served by public transit. Transit-supportive densities must be allowed to encourage the location of, and to sustain, transit options. Likewise, development review processes are streamlined and sidewalk and street standards are reviewed to encourage development within transit-centered areas.
6. **Enhance Streetscapes.** In order to achieve pedestrian-friendly environments, a goal of urban codes is to enhance streetscapes and civic life. Streets should be public spaces. Dimensional regulations for buildings and streets should work to effectively shape the public space to provide a comfortable environment.



III. STEPS TO CREATING GOOD URBAN DESIGN

As discussed above, form based codes can impinge on existing development expectations. To minimize complaints from surrounding neighbors, any urban design implementation should be well researched and supportable. The following three-step process outlines the procedure and explains where the City of Rockville stands with regard to incorporating design regulations in a new zoning code.

1. **Analyze the Existing Context** – Analysis can include studies of urban form, space and building typologies, lot types, and local character. The study of an urban environment would include all the characteristics that make it what it is – street layout, public spaces, massing and orientation of buildings, building design and characteristics. These studies are needed in order to understand the character of the existing areas and the valuable lessons to be learned for new developments or the rehabilitation of existing areas.

Besides the Master Plan, Rockville has undergone a number of neighborhood studies to determine what type of development individual neighborhoods desire. In particular, plans have been developed for the Town Center, Lincoln Park, East Rockville, Rockville Pike, and Twinbrook neighborhoods. To develop these plans, citizens assisted in identifying issues, challenges, and problems facing the neighborhoods. In addition, workshops and citizen focus groups were held to discuss individual topics of interest and to generate citizen input.



2. **Establish a Vision** – Visioning is based on the continuation of existing traditions or character and includes recommendations on how to incorporate new development into those established trends.

The policies of zoning and the specific recommendations of the Master and Neighborhood plans are addressed in the “Competing Values” issue paper. The highlights of the Master Plan’s recommendations for urban design include:

- New growth should be concentrated in the Town Center;
- A mix of housing uses should be retained that will meet housing needs, protect the quality of life for residents, and enhance Rockville’s tax base rooted in Smart Growth principles and regional cooperation;
- A multimodal transportation system should be provided that enhances accessibility while protecting neighborhoods and the environment;
- The protection of the environment should be integrated in all public and private development and land use decisions; and
- Accepted community design principles should be used including environmental, public art, and property maintenance standards to add to the distinct identity of Rockville. In particular, establish design standards for commercial and mixed-use areas and public and government buildings.

The individual neighborhood plans recommend the incorporation of the following urban design goals:

- Allow for a greater mix of uses;
- Require ground floor retail uses in property that fronts Maryland Avenue;

- Create an Urban Design Overlay District within which design guideline recommendations would be applicable;
- Retain existing R-60 residential zoning in Lincoln Park Neighborhood;
- Retain the existing sense of identity in the East Rockville community as a quiet, secure, residential neighborhood through a neighborhood conservation area;
- Redevelop Stonestreet Corridor with a mix of uses that are complementary to the surrounding area, require a “Main Street” development pattern, and preserve a pedestrian zone in the redevelopment; and
- Redevelop the metro station as a transit-oriented, mixed use area.

An additional step the city has taken to establish a vision is to provide this series of white papers, especially the “Competing Values” paper. These policy topics will garner Mayor and Council directives to drive the necessary decisions to be made throughout the revision.

The Urban Design staff committee has established their own vision for the city. That is to promote “livability.” By livability, staff means:

- A high quality contextual style of development. In other words, ensuring that there is a pleasant street atmosphere, environmentally-friendly development requirements, and flexibility in design options.
- Walkability and transit options to activity centers containing civic (post office, library, court house) urban (movie theaters, restaurants, etc.) and necessity (grocery store, hardware store, etc.) amenities.
- Affordable options

3. **Implement the Vision** – Finally, the implementation scheme should follow established premises and guidelines the city has established, from the master and individual plans, of what is considered a good framework for future planning. Part two of this paper discusses the alternative methods to implement the vision.

IV. CURRENT DESIGN PROVISIONS IN ROCKVILLE

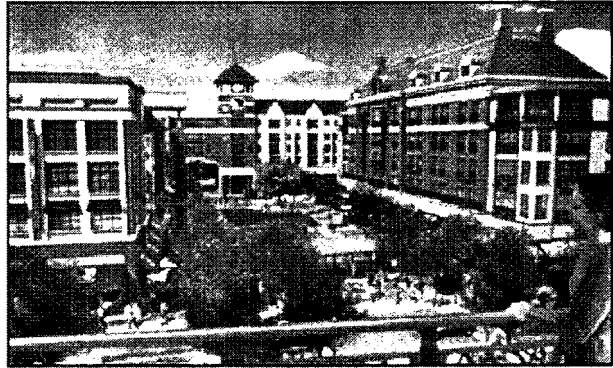
Before new procedures are established by the city, the current urban design methods should be reviewed. The City of Rockville is currently pursuing a number of options to maintain good urban design. The following is a list of regulations and programs currently used in the city.

- **Art in Public Places** - It is the goal of the Art in Public Places program to have publicly accessible arts of the highest quality throughout the City of Rockville that reflect the vitality and diversity of the people and business within the area. These displays are on public property and easily accessible to citizens and visitors alike. The arts help to preserve and enrich the character of the community and to improve the quality of life within the City.
- **Publicly Accessible Art in Private Development** – A relatively recent regulation is the requirement to include publicly accessible art in private development.

Publicly accessible art enriches the urban landscape by engaging the eye, mind and spirit. Publicly accessible arts projects must be planned for from the beginning of a development project, to ensure that the greatest range of possibilities are considered to coordinate and maximize the available fiscal, material, and service resources to provide this public service.

- **Large-scale retail regulation** – In certain zoning districts (RPC and C-2) retail establishments larger than 65,000 sq ft. are prohibited. In addition, the regulations for these zones outline design standards for retail establishments greater than 25,000 sq ft of gross floor area and shopping centers of any size.
- **Sign Review Board** – The Sign Review Board reviews applications for new signs to ensure compliance with the zoning code and to maintain aesthetic priorities.
- **Historic District Commission** – The HDC regulates all exterior changes (with the exception of paint color) to buildings located within historic districts. Design review for exterior alterations in an historic district includes exterior siding, roofing, windows and doors, fencing, landscaping, parking, and signs.
- **Street Tree Master Plan** – The City has established a plan to develop and maintain tree-lined streets. The plan provides for the planting and maintenance of uniform streetscape of city streets and includes a pre-approved list of trees by individual streets.
- **Development Review Committee** – A number of city departments are involved in site plan review. Staff from different departments review applications and discuss issues relating to the proposed use and design of a site plan to ensure quality design. A design consultant also reviews buildings and sites that are developed under the Optional Method of Development within the Town Center and Rockville Pike Corridor and other projects as needed.
- **Visual Preference Survey** – A 1997 Visual Preference Survey outlines how a number of sites and streetscapes could be improved in the Town Center and elsewhere in the city.
- **Neighborhood Surveys** – As neighborhood plans are created, the city has completed surveys of the types of uses and styles of development within the individual neighborhoods. Specific design guidelines have been created for neighborhoods when appropriate.
- **Existing Design Guidelines** – A number of neighborhood plans have developed their own design guidelines to be adopted and implemented in the individual neighborhoods. The Town Center neighborhood plan, for example, includes Urban Design Overlay District guidelines.

- **Development Review Design** – Recent developments, which were created under a development review process, have created individual design plans for their neighborhoods. King Farm and Fallsgrove, in particular, have adopted architectural design guidelines.


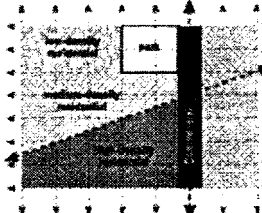
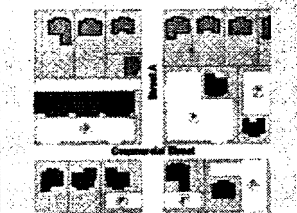

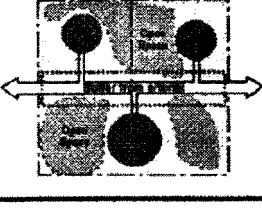
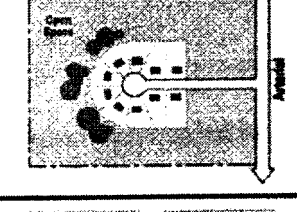

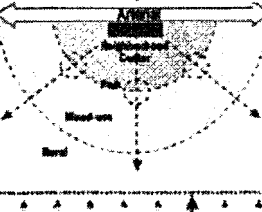
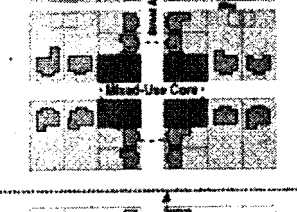
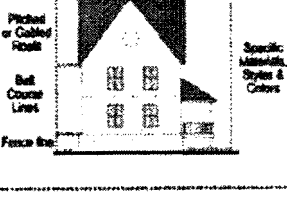
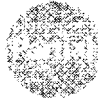
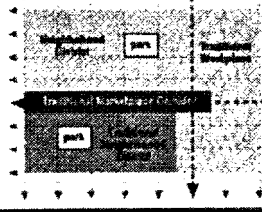
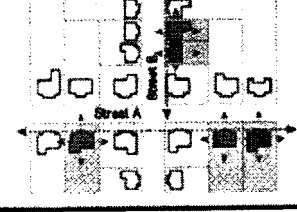


V. TYPES OF ZONING

Zoning codes, no matter their type, regulate what takes place on privately, and sometimes publicly, owned lands through controls on three elements: use, shape, and bulk. Use regulations control the location of residential, commercial, and industrial development in separate sections of the city or in designated mixed-use developments. Shape, on the other hand, refers to the two and three-dimensional configuration of development (in other words, where to locate objects on a lot). Finally, bulk requirements regulate the amount of building permissible on a particular unit of land (height, width, floor area). The variations in zoning codes are a result of different balances among the three types of regulations.

A. Euclidian Zoning

Many of the cities we think of as “great” developed prior to Euclidian zoning. Euclidian zoning, or a zoning code characterized by 1) prioritization of use regulations and 2) inclusion of proscriptive rules (what the jurisdiction does *not* want to see) has been the trend for most of the last century in Rockville and throughout the country. This conventional zoning has produced patchwork quilts of single-use districts, often with minimal connections (vehicular, pedestrian, or visual) between neighboring zones.

		Applicability to all Development Patterns	Physical Design Regulations within Zoning Codes		
			Neighborhood	Parcel	Building
Conventional Approaches	Euclidean Code				N/A
	PUD				N/A
Emerging Approaches	TND				
	Form District				Contextual

Source: Rouse, David; Zobl, Nancy; Cavicchia, Graciela, "Beyond Euclid: Integrating Zoning and Physical Design," Zoning News. APA, October 2001.

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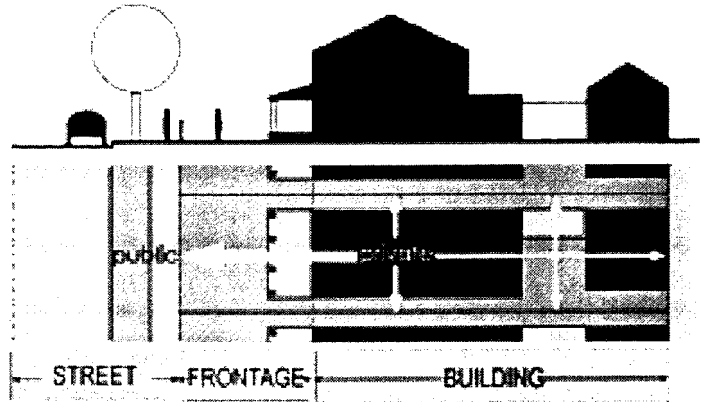
B. New Urbanism

New Urbanism is a relatively recent movement promoting a return to the pre-WWII city design. Today new codes are reconsidering pedestrians' viewpoints and ensuring a pedestrian "sense of place." Instead of focusing development on use, urban design regulations emphasize physical form. Instead of stating what a community does not want, form based codes state what the community does want to see (prescriptive rules).

One new approach under the umbrella of new urbanism, performance zoning, is the dramatically opposite approach to prescriptive regulations. This form of zoning applies a more "hands off" approach for government. Performance zoning regulations control the intensity of the land use, not the use itself and not the building size, shape, or dimensions. The owner of a lot may use whatever means of development possible to achieve a regulated goal. Performance regulations prioritize the impacts of a parcel on the surrounding area. For

example, if an owner can operate heavy industrial uses while not exceeding a specified decibel count, such use may be “performed” in any district where they do not exceed the set decibel regulation. Likewise, if an owner can build a 100-story office tower without casting a shadow on surrounding neighbors, the building would be permitted under performance zoning with such standards.

Another new zoning approach known as form based zoning is not impact-oriented like performance zoning, but focuses on the particular development of individual lots. Form based zoning focuses on established bulk regulations to solve the Euclidian “problem” of use separation. Form codes are designed to provide more flexibility than conventional codes to promote development in largely built out communities. These codes work well in established communities because they effectively define and codify a neighborhood's existing DNA or they can implement new building types when a radical change is desired. Building types can be easily replicated, by regulating for similar architectural styles as already exist. Infill that is compatible with surrounding structures is thereby promoted.



Form based zoning encourages independent development by multiple property owners because it regulates on the individual building (townhouse v. shop front) or lot (square footage) basis. Overall building approval eliminates the need for large land assemblies, which are often difficult in primarily developed communities, such as Rockville. On the other hand, because long-standing zoning ordinances create vested property rights and values, any changes must take those rights and values into account and, to a reasonable extent, preserve them. Otherwise, changes risk being confiscatory and unconstitutional. As a result, form based codes must be based on well-researched comprehensive master plans to determine where buffers are necessary.

Performance zoning has the particular advantage of minimizing the need for zoning amendments to include newly developed uses or building types. Variances are rarely needed from performance standards as the acceptable impacts are pre-determined. Performance zoning, however, requires additional materials and strict staff involvement to enforce. Under performance zoning, uses are determined through sometimes confusing calculations of a variety of factors. This requires local zoning administrators to be more adept at making appropriate and fair determinations based on sometimes subjective criteria, and can lead to more legal challenges. For example, to ensure that set decibel levels are being met, staff needs to be present at certain times and with certain equipment to measure the decibels. In other words, there is a steeper learning curve to implement a performance based zoning code.

Form based zoning, on the other hand, would be more appropriate in certain sections of Rockville, to maintain neighborhood character and to promote infill. Because they are prescriptive (they state what you want), rather than proscriptive (what you don't want), form-based codes can achieve a more predictable physical result than traditional Euclidian zoning. The elements controlled by form-based codes are those that are most important to shaping a high-quality built environment. Form regulations also encourage public participation because they are often easier for nonprofessionals to understand. Bulk regulations are easier to visually demonstrate so that citizens can see what will happen in their community. The built results of a form-based code reflect the diversity of a built-out city, like Rockville, that comes from the communication of a community-wide agreed upon vision.

PART TWO PARTICULAR REGULATIONS

There are two issues that urban design seeks to address: livability and compatibility. The solutions for both are often addressed in a set of select regulations. A number of common New Urbanist regulations implemented in jurisdictions throughout the country correspond to the principles of design listed in part one: mixed uses, mass and scale, architectural standards, transportation, and streetscaping.

While these types of regulations are not new, the way they are implemented has changed with the changing idea of what is considered good urban design. Though many of these regulation types are included in the current code, new ideas on quality development questions whether these regulations have created sterile environments. For example, the policy at the time of adopting the residential shopping center regulations was to encourage uniformity. While this presents a clean look to development, it does not allow for imaginative design that adds character to a city. Urban design-friendly regulations encourage the development of character to create a “sense of place” that distinguishes a city from other cities.

I. MIXED USES

Permissible uses, stated in general terms (e.g., retail, residential), are identified in urban design regulations for either the types of streets on which development is to be located or for each building type. This allows flexibility in assigning different uses to each floor of a mixed-use development, and avoids the problem of trying to communicate the same information on a zoning map.

The types of uses permitted can vary. Uses can vary by district, by type or by location. A greater discussion of uses will be given in the accessory and use papers.

1. **Retail** – Retail is an inclusive phrase covering a wide range of possibilities. In particular, it may include consumer goods (general merchandise, apparel, furnishings, etc.), personal business services, professional offices, restaurants, grocery stores, hotel, theater, etc. To clarify slightly without overly regulating for specific uses, retail may be classified into primary and secondary categories, whereby designated staff may determine, through established criteria, whether future unspecified uses fall into either category.

- a. **Primary retail uses** – These retail uses often provide entertainment or leisure activities, promote high walk-in customer counts, or are shopping



*Mixed Use Infill Development
(Portland, Oregon)*

destinations. They are often located on ground floors or may take up multiple floors.

- b. **Secondary Retail uses** – These retail uses provide personal or business services and are often located on levels other than the street level and off the primary street frontages.

2. **Ground Story v. Upper Stories** – Within many design regulations, different uses are permitted, depending on the location of the use within a building. Common acceptable ground story uses include retail and office uses in busy centers. Upper stories are often reserved for residential or office uses.

II. MASS AND SCALE (i.e. Building Envelope Standards)

Building envelope standards establish basic parameters governing building form, including the envelope for structural placement and additional permitted/required lot elements. The placement of structures is also regulated in relation to fronting streets and adjacent building lots. The following highlighted elements are key standards to be modified in the zoning revision.

1. **Lot Width** – To avoid pipestem lots, and to create a harmonious “curb appeal” development, the width of the lot facing the street should be prescribed. There are different expectations of lot width, and different considerations, for public and private spaces.
2. **Buildable Area** – Mass and scale are directly related to the types of transportation corridors that serve the lot. Various standards may be applied depending on the type of street on which the development is proposed.

The developable area is most clearly displayed through illustrations within the code. Whether overhangs, stairways, porches etc. may be planned outside the buildable area designated should also be addressed. The following are two commonly regulated characteristics.

- a. **Height** - Some communities place height requirements in an individual category. Limitations on height are important to ensure that a building does not overwhelm its neighbors and to maintain a harmonious appearance of a “street wall. “ Height can be regulated in a number of ways, including placing a restriction on the maximum number of floors, a limitation on the amount of feet a building can be built up to, or making proportional limitations based on setback.

Various elements of a design may also have different height requirements. For example, ground floors may allow larger height maximums to permit retail uses.

In addition to the particular height requirements for districts or uses, staff will also review the definition of height to ensure consistency in measurement.

Height has also been discussed through the mansionization amendment review.

- b. **Setbacks or Build-to Lines** – To create a unifying effect for a number of freestanding buildings, the buildings should be aligned 1) from the street, 2) to each other and 3) to other existing surrounding development. Setback lines are minimum requirements for the location of buildings away from lot line. Build-to lines are lines upon which a building must be built. Most urban design regulations include build-to line regulations rather than setbacks.

As with height, various elements of a design may have different setback or build-to requirements. While ground floors may have larger setbacks to accommodate sidewalk space, upper stories may allow for a lesser requirement, providing an overhang to allow for more space.

- c. **Impervious Surface Coverage Limitation** – As reviewed in the mansionization amendment discussion, impervious surface coverages restrict full lot build out. Current stormwater runoff regulations also address these issues. As an alternative, minimum vegetative coverage regulations could be applied to ensure that a portion of the yard is kept green.

III. ARCHITECTURAL STANDARDS

Architectural standards are regulated when communities want to exercise a higher level of control over the appearance of individual buildings. These regulations may appear in master-planned developments, special retail districts, historic districts, etc. Some communities in Rockville have begun to adopt architectural standards in their neighborhood plan design guideline recommendations. Particular emphasis may be given to doors, windows, stairs, and roofs. Style may also be included as part of the architectural standards. Many urbanist codes choose to avoid direct references to building style, fearing that too much specificity will lead to an overly homogeneous, "themed" look.

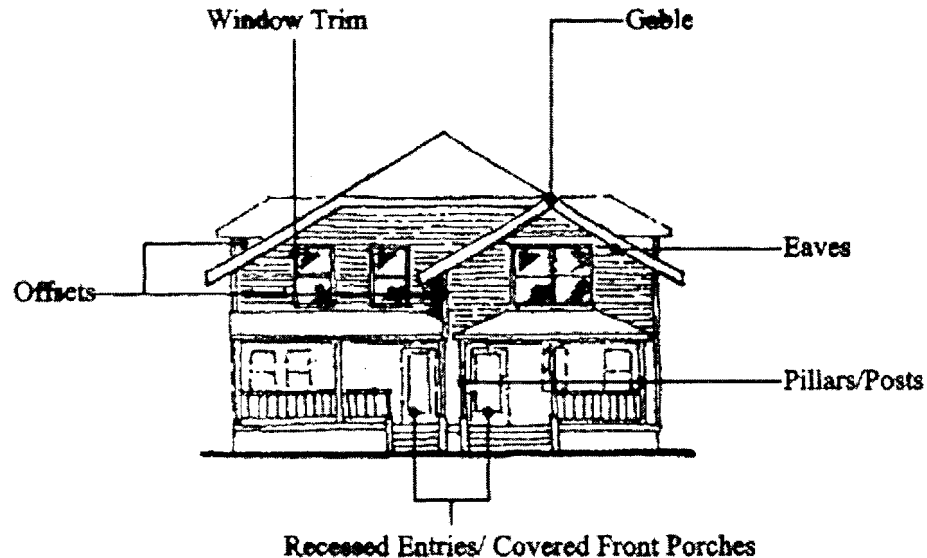
1. **Colors** – Some communities restrict predominant colors to a select number of allowable dominant building colors (though accent colors may or may not have a wider range). The intent behind such regulations is to create a primary unifying element. In addition, a regulation may require applicants to submit color "samples," and a description of where and how the color is to be used at the time of site plan review. Though there may be some variation of the same color on different materials, the idea is to create a homogenous development.
2. **Exterior Materials** – Again, to maintain a homogenous atmosphere, dominant materials and/or construction techniques may be defined. Acceptable combinations may be regulated, as may acceptable accessory building materials. A change of materials from horizontal siding to masonry or stucco, for example, will create a significant change in appearance.



3. **Architectural Features and Details** – Building elements to be repeated or merely permitted include set rooflines, canopies, building ornamentation, patterns, or building forms. The same floor plan can appear quite different with different architectural features. Consideration may also be given to regulations for accessory buildings as well as the main building.

To effectively coordinate a sense of unification throughout all buildings, the elements regulated should be a major feature, not just a minor detail. Often variety is encouraged with regard to a particular element. The developer can pick a style and then manipulate design elements to make units with the same floor plan look quite different.

- a. **Roof Design**- Roof pitch, for example can be an effective tool for dealing with monotony where buildings have the same general footprint. Orientation of the roof to the street is another alternative.
- b. **Street Façade** – With city development, to ensure a consistent pattern, some communities impose a regulation to require the portion of the façade facing the street to be of a simple plane (limiting jogs to minor amounts and interrupted only by windows, awnings, doors, etc.).



- c. **Architectural Styles** – With a style approach, the builder offers the home buyer floor plans from different architectural styles modeled after historic periods, such as colonial, Greek Revival, Victorian, Tudor, prairie, or modern. The review of the proposed elevations needs to be rigorous, ensuring that the buildings really do look different but cohesive.

IV. TRANSPORTATION CONNECTION

Emphasis on urban design must consider transportation alternatives. Transit-centered design may be ideal in the Town Center and Rockville Pike zones. In addition, guidelines may be developed for the Stonestreet Corridor. Five design principals in creating transit option friendly design are:

1. Increase densities in appropriate locations;
2. Connect people and places through a complete street network that invites walking and bicycling and provides convenient access to bus or rail.
3. Mix uses to create a quality of life where people may chose to live near their work, walk to the local store, or bike to the library.
4. Place parking in alternative locations to support density and create inviting places to walk, and
5. Create great places for people.

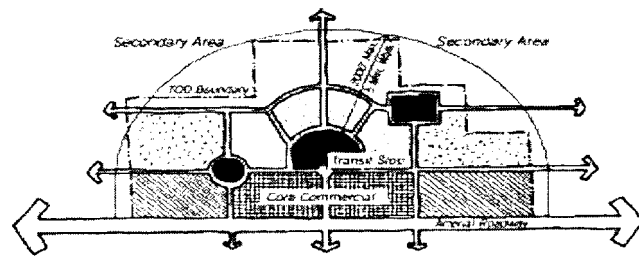
Minimum Densities for Supporting Transit				
	Local Bus, Intermediate Service¹	Local Bus, Frequent Service²	Light Rail³	Transit⁴
Dwelling units per acre	7	15	9	12
Residents per acre	18	38	23	30
Employees per acre	20	75	125+	N/A
<p>Note: The density of the employment destination is more important in influencing trips than the density of the residential area where the trips originate.</p> <ol style="list-style-type: none"> 1. Average density varies as a function of downtown size and distance to downtown. 2. Average density over a two-square-mile tributary area. 3. Average density for a corridor of 25 to 100 square miles; transit to downtowns of 20 to 30 million square feet of nonresidential space. 4. Average density for a corridor of 100 to 150 square miles; transit to downtowns of more than 50 million square feet of nonresidential space. <p>Source: Dunphy, Robert; Myerson, Deborah, Pawlukiewicz, Michael, <u>Ten Principles for Successful Development around Transit</u>, Urban Land Institute, 2003.</p>				

Transportation Oriented Development (TOD) is a particular type of development that focuses on pedestrian options and regulates the land use characteristics conducive to generating non-automotive trips. In Rockville, individual Transit Oriented Areas (TOA) have been identified by the center to determine where to concentrate density. Considerations include placement of commercial uses, housing, employment, parks, and civic uses within walking distance of transit stops.

Transit-oriented design strategies mix land uses vertically and horizontally to provide necessary densities (see "Minimum Densities for Supporting Transit"). A TOD neighborhood has a center with a rail or bus station, surrounded by relatively high-density development, with progressively

lower-density spreading outwards. For example, the neighborhood center may have a transit station and a few multi-story commercial and residential buildings surrounded by several blocks of townhouses and small-lot single-family residential, and larger-lot single-family housing farther away. TOD neighborhoods typically have a diameter of one-quarter to one-half mile (stations spaced half to 1 mile apart), which represents pedestrian scale distances. The Master Plan, transportation element has already identified the .7-mile radius around metro stops in which to concentrate densities. That map is included as attachment five.

Currently, the only benefits to a TOA designation is the allowance of increased traffic congestion because more transit options are allowed within those areas. In addition to density, a Transit Oriented design must include provisions to create attractive, connected networks of transit options including cycling and walking. Quality urban design must exist around transit stops to improve streetscaping and to make people want to use transportation alternatives. Mixed uses should be allowed and should include shops, schools, and other public services, and a variety of housing types and prices, within each neighborhood. In addition, parking alternatives should reduce the amount of land devoted to parking compared with conventional development, and should take advantage of the parking cost savings associated with reduced automobile use.



1. Transit-Oriented Urban Design Schematic. Source: *The Next American Metropolis*.

In conjunction with a TOA, Traditional Neighborhood Developments (TND) are often employed. Like a TOA, TND communities emphasize mixed uses and high densities. Unlike a TOA, TNDs do not focus primarily around a mass transit node. While a TND density may support a mass transit option, there is no associated requirement for transit. A greater explanation of TNDs will be provided in the Optional Method Paper and in part 3 of this paper.

A range of recommended street types may be part of the code or included in individual neighborhood design guidelines in places where streets are not individually designed. Section diagrams indicate such standards with dimensions for travel and parking lanes, sidewalks, medians, and planting strips. In addition, recommendations should be given for parking and entrances that can alter the traffic patterns of the neighboring community. Parking alternatives should be offered to ensure that parking is both 1) adequate and 2) fits into the character of the neighborhood.

V. STREETSCAPING

Streets are a large proportion of the public space with which urban design is concerned. To provide adequate streetscaping, codes or guidelines should address sidewalks and the individual elements that go into sidewalk design.

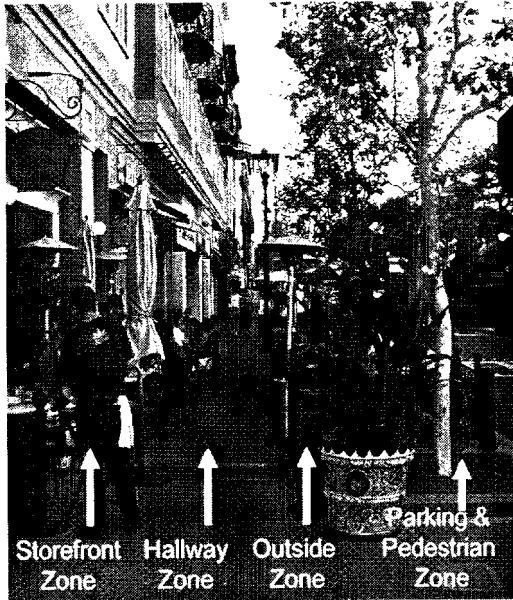
In planning a sidewalk system for an area, the priorities of maximizing pedestrian capacity / walking speeds and creating an experience must be balanced. In areas near an entrance to stadiums, amusement parks, and tourist areas, very wide, unobstructed sidewalks are needed to move large volumes of pedestrians at a relatively high speed. In outdoor shopping areas and main streets, however, the goal is to provide opportunities for interaction with other people, window shopping, and access. In short, a sidewalk on a mixed-use shopping street is designed to provide ambiance.



A number of principles have developed based on the analysis of human behavior in shopping environments. The S.H.O.P. Model was developed by Street-Works and applied in the design of mixed-use streets such as Bethesda Row, Santana Row, and the Rockville Town Square. S.H.O.P. stands for Storefront Zone, Hallway Zone, Outside Zone, and Parking/ Pedestrian Zone. These four zones serve as the foundation for great retail streets where people go to be “somewhere” rather than just going to buy something.

1. **Storefront Zone** – designed to “maximize the exposure to the merchandise perpendicular to the flow of pedestrian traffic.” In the Town Square this area is referred to as the 2-foot wide storefront expansion zone. In many cities, restaurants may have seating within the Storefront Zone.
2. **Hallway Zone** – the walking portion of the sidewalk. By making the pedestrian width slightly smaller than required, the area will seem busier. This zone should not be more than eight feet wide to achieve this effect.
3. **Outside Zone** – the “area between the walkway and the street curb, and should be considered as an ‘outdoor’ room.” This ‘room’ should feature urban amenities such as street furniture, kiosks, and fountains. Trees are the most important element required here to provide a sense of enclosure, and make the space feel like a room. Often the width of the tree pit controls the width of the outside zone.
4. **Parking/Pedestrian Zone** – offers a “safe barrier between moving traffic and the meandering pedestrian.” This zone provides the amenity of a second tier walkway for pedestrians, if the hallway zone is blocked or overcrowded. In the Town Square, one side

of Newmarket Street fluctuates between the Outside zone and the Parking/Pedestrian Zone.



In the Town Square development, the S.H.O.P terms were called Storefront Expansion, Pedestrian, Tree/Amenity/Outdoor Café Seating, and Buffer. The minimum total sidewalk width (excluding the Vias, Plaza and the curving sidewalk area next to the Library) ranges from 10 feet to 20 feet. The most constrained block (Beall Avenue between Maryland Avenue and MD 355) has a 2' storefront expansion zone, 8' pedestrian zone, no Tree/Amenity/Outdoor Café Seating Zone, and no buffer zone. Maryland Avenue has a 2' storefront expansion zone, 9' pedestrian zone, 7' Tree/Amenity/Outdoor Café Seating Zone and 2' buffer zone. These requirements balanced the function of the sidewalk and site constraints to achieve the goals that were desired for those areas.

The variety in sidewalk widths should add to the variety of these streets, rather than detract. The variety of urban spaces is one of the elements that set successful downtowns apart from sterile, corporate office parks or strip shopping centers where every street, sidewalk, street tree, sign, and building looks exactly the same. As with any goal, there will be times in the future when another foot or five feet in any given location might be desirable to maximize a particular goal. The use of design guidelines, with added flexibility, will allow variation where necessary.

In summary, the basic principles for mixed-use city streetscaping include:

1. Provide adequately sized unobstructed pedestrian pathways to accommodate window shopping and through traffic.
2. Vary pathway widths on a frequent and irregular basis to provide “visual interest” and to adjust to pedestrian volumes.
3. Activate wide areas by secondary uses (kiosks, restaurant seating, gift wrapping, stroller rentals, etc.), landscaping, street furniture, and art.
4. Ensure that street trees are of a dimension and of adequate foliage to create a “sense of place” or an “outdoor room” within the sidewalk pathway. Regulations should list the appropriate tree and groundcover species, in addition to requiring new plantings with a set spacing between them. The types of plantings required should consider the aesthetics and maintenance of the plants. Drought tolerant or native species (including trees, shrubs, and turf grasses) that do not require extensive watering are recommended.

5. Ensure that safety regulations are in place to encourage use of the environment. Streetlights can help to maintain a sense of security along a sidewalk when pedestrians are likely to visit shops and restaurants at night. The location (on one or both sides of a street or in the median), for installation of lights and the spacing between them are typical requirements. In addition, “dark sky” requirements on lighting fixtures can decrease light pollution around an urban environment. Ornamental light requirements may also be included. To ensure consistency, a particular type of lighting fixture may be required to be repeated throughout an area of the city as well as permitting only certain wattages, heights, types, or colors of light produced.
6. Consider fenestration regulations to ensure that the street front does not have a blacked out appearance. In addition, or in the alternative, the City could encourage window dressing to encourage window shopping.

If the changes increase the required right-of-way or sidewalk standards, then appropriate documents, in addition to the zoning code revision, will need to be amended. The amendment procedure for each of these documents varies. The following lists the documents from least to most time intensive procedural processes.

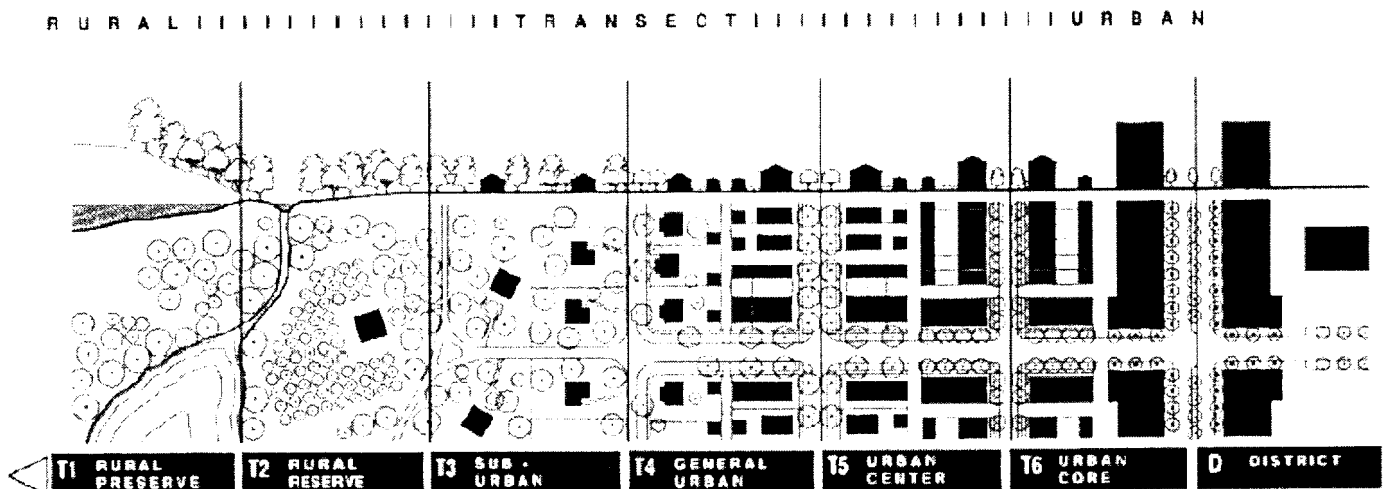
- The *Standards and Details for Construction* is approved by the Department of Public Works,
- The *Streets and Public Improvements* Chapter of the City Code is changed by an ordinance amendment,
- Master plans require a master plan amendment process.

PART THREE OPTIONS AND RECOMMENDATIONS

I. ZONING DISTRICT OPTIONS

Urban design zoning has been applied in different ways, depending on the needs of the individual community at the time of the zoning revision. In general, urban design regulations, where used, are either applied on a citywide or individual neighborhood basis (either as a primary or overlay zone).

1. **Contextual / Transect Neighborhood Zoning** – A large step away from current standards would be completely revising the existing zoning code to regulate based on the qualities of the surrounding area. Contextual zoning, also called transect zoning, considers the city as a whole, like an onion. Each layer permits gradually denser and denser uses and, as a result, more regulation. Prescriptive, not proscriptive, regulations are associated with this form of planning. As the City of Rockville is greatly built out and has existing variable densities and types of development throughout the city, this option is not recommended.



2. **Form-Based Zoning District(s) (Special Purpose District)** - Special purpose zones are those that are meant to address special geographical areas or issues. Included here may be the Rockville Pike Corridor or Town Center Planning Area.

A particular district can be designated to regulate based on form. For example, in Arlington, the Columbia Pike Special Revitalization District form-based code is designed to foster a vital main street for its adjacent neighborhoods through a lively mix of uses – with shop fronts, sidewalk cafes, and other commercial uses at street level, overlooked by canopy shade trees, upper story residences and offices. The key to the Columbia Pike Special Revitalization District, and other districts like it, is a regulating plan. This plan provides specific information on permitted development for each building site. The plan shows how each lot relates to public

spaces and the surrounding neighborhood based on the type of street on which the building fronts and the type of building proposed.

One type of form based zoning district used throughout the country is a traditional neighborhood development (TND) district. TND zones allow for the creation of neighborhoods (developments) with a range of uses and housing types. These zones limit the size, location, and design of buildings as opposed to the strict separation of uses.

There are certain design features associated with TNDs. Commercial uses and more intensive residential uses are frequently required and to be located in the TND center. An interconnected network of narrow, safe, and aesthetically pleasing streets that provide a variety of routes for local traffic are also required for these developments. A range of transportation options should, therefore be available due to the pattern of streets and the proximity of various land uses. High quality public spaces (greenbelts, parks, plazas and streets) provide an organizing feature and gathering place for the neighborhood.

Many zoning and subdivision ordinances do not permit the development of TNDs because of the development's requirements for large lots, large setbacks, wide streets, and separation of uses. In some cases, Planned Unit Development ordinances have been used to build TNDs, but now more and more localities are adopting specific TND ordinances.

3. **Overlay** – Another way to apply form based zoning ideas is as a zoning overlay. As will be discussed in the optional method paper, an overlay district applies additional standards to protect certain features or to encourage a particular type of development. Where there is a conflict between overlay and underlying zoning standards, the overlay standards will apply because they are stricter.

Overlay zoning has been applied in Maryland for protection of certain features, to encourage transit or high growth areas, and to impose specific standards. Protection zones have included critical areas, stream and buffers, rural protection, residential conservation, mineral resources, floodplains and historic district preservation. Maryland's growth overlay zones include highway corridors, transit station overlays, and transfer of development rights zones. Additional standard zones include solid waste, signage control, and airport overlays. Maryland Department of Planning recommends the expansion of the use of overlay zones including site plan design option, flexible subdivision approval zones, PUD, and special financing zones.

One particular overlay that the City may consider is an infill overlay. An infill overlay may be applied to built up areas where new development is desired. Through an infill overlay, the main character of the existing code can be maintained. The particular areas of the city where intense growth is desired or likely to occur, however, will regulate form through special infill regulations.

As the city of Rockville continues to develop, the greater the percentage of infill development compared to greenfield development. The Infill Development Overlay Zone (IDZ) would accommodate infill growth by encouraging a compatible, high quality community environment enhanced by a balanced, walkable, compact mix of uses in existing communities. Form based principles can be applied through particular area requirements.

Historic districts can also be applied through an overlay zone. The parcels applicable to historic designation would be subject to the standards of an historic overlay in addition to those of the underlying zone. Overlay designation would allow the same standards for historic preservation to be applied throughout the city, though the properties may be subject to different underlying zoning standards.

An additional overlay is the Neighborhood Conservation District (NCD), as proposed for Lincoln Park. The NCD combines historic preservation and aesthetic design as an overlay to Euclidian zoning. It is usually applied in those neighborhoods that do not qualify for an historic district classification. The intent is to retain the overall physical characteristic of a neighborhood through recommended design guidelines.

4. **Floating Zones** - Floating zones define a use that a community wants to encourage to enable the city to accommodate new development or preserve what exists. The floating zone is particularly useful in situations where a community wishes to permit a limited number of specific uses (large shopping centers, for example) but does not wish to map their locations in advance. Examples of floating zones that may be applicable for the city of Rockville are a Planned Development District (PDD) and a Historic District zone.

Floating zones also allow for locating use types which cannot be anticipated but for which the plan would like to provide. For instance, a community may have an anti-industry policy and no industrial zone in its local ordinance. It may, however, be amenable to a high technology, low-impact industry under certain conditions. The floating zone allows this kind of control and flexibility.

In content, a floating zone is the same as a conventional zone. It describes the permitted uses, setback requirements, and other standards to be applied in the district. Unlike conventional zoning districts, however, the floating zone is not designated on the zoning map. Once enacted into law it "floats" over the community until, upon approval of an application, it is "brought down to earth" to be affixed to a particular parcel through an amendment to the zoning map.

The idea behind adopting a floating zone is that for various reasons, the city does not know where the district should be located at the time of adopting a zoning code. The floating zone can be affixed to a qualifying parcel of land, either upon the application

of the parcel's owner or upon the initiative of the local legislature. Upon approval, the parcel is rezoned to reflect the new use and becomes a small zoning district

Floating zones often allow for more intensive use of the property than the previously existing zoning. As a result, particular attention must be given to protect surrounding property owners. Floating zone regulations should contain a number of provisions intended to mitigate the impact of its development on the surrounding area. Normally, for a parcel to be eligible for rezoning under a floating zone, it must be of a sufficient size to insure that the development can be fitted properly into its surroundings. A site plan review by the Planning Commission is a typical requirement for floating zone approval. The ordinance can be worded so that applicants must demonstrate what impacts the proposed development will have on a variety of matters such as site access; water and sewer service; design continuity; effect on natural resources; visual and noise impact; schools; other municipal services and tax base; preservation of open space; and the effect on nearby property values.

II. ALTERNATIVES

In addition to or separate from imposing set urban design regulations, there are two alternatives that can be incorporated into application of the above zoning options or held separately. First, a statement of architectural compatibility may be required to demonstrate that a proposed development or redevelopment meets certain requirements that can achieve the principles of urban design. Secondly, design guidelines could be established, outside the code to ensure that new development will meet certain characteristics without having the force of law to impose those designs.

1. **Statement of Architectural Compatibility.** The Town of Cary, North Carolina has adopted a requirement to include a statement of architectural compatibility (SAC) with all site plans for buildings within a non-residential center. This statement ensures the architectural compatibility as the Development Review Committee, already established in Rockville, includes in their review. In Cary, the SAC is meant to designate the unifying elements that are to be incorporated within the entire project (including any outparcel) and specifically how these elements are to be used. The SAC is required to be submitted with the first site plan submission. The approving authority considers the SAC as part of the site and/or subdivision plan review.

In Cary, the SAC is required to include:

1. Primary physical characteristics including predominant color(s), exterior materials and architectural features;
2. Primary landscape theme (general, not specific);
3. Building height;
4. Lighting elements (general);
5. Other elements which may be relevant to a specific development and how they are compatible with the adjacent sites; and

6. Uniform Signage Plan (general).

2. **Design Guidelines** – Another alternative is to maintain a separate design guideline manual. Many communities establish design guidelines which are referenced in the zoning code, but which is established and maintained outside any legislative requirements. A regulation to comply with any existing design guidelines are often considered a basic foundation for the creative design process, not as the only solution for design.

Design review is a discretionary aspect of zoning approval. In Rockville, design review guidelines have already been established for substantial alterations within historic districts, and in the Town Center, Rockville Pike and Lincoln Park Master Plans. The government review authority for design review is typically either an independent, appointed body whose members represent applicable areas of expertise similar to the current Historic District Commission. In other jurisdictions, these bodies consist of city department staff to provide expertise like the current Development Review Committee.

Design review guidelines often list the measurable design attributes listed in Part II of this document. They do not intend to impose a set standard on beauty, as beauty represents different things to different people. Instead, design standards ensure a sense of conformity and compatibility of development into the existing landscape of the city.

While design guidelines provide flexibility, and are easy to amend, there are some arguments against adopting design guidelines. In part, they can be difficult to apply consistently, because there is often leeway for subjective interpretation. Design guidelines can also be difficult to enforce.

One consideration in adopting a Design Guidelines Manual is to specify what development projects, if any, are exempted from design review. Examples may be:

1. Projects that involve the development of two or fewer single-family units and are not subject to any other discretionary review or approval;
2. Underground construction, which will not leave any significant, permanent marks on the surface after completion. Utility boxes, piping and appurtenances, are considered “significant permanent marks;”
3. Maintenance work on buildings, landscaping, or grounds (including parking lots) which does not significantly alter the appearance or function of the building, landscaping, or grounds;
4. Interior remodeling work; and/or
5. Temporary uses and structures as defined by the Zoning Code.

III. RECOMMENDATION

After reviewing the City's goals for urban design found in various plans, and the current national policies and implementation techniques for urban design, Staff has concluded that the city has three options:

1. Adopt urban design regulations (in guideline or legislative form) for particular sections of the City using one of the above zoning district types.
2. Maintain existing districts but adopt an alternative method of ensuring that form is considered in zoning approval, such as a statement of architectural compatibility.
3. Maintain the current regulations on use and form, with only changes in the organization of the sections of the zoning code.

Rockville has a unique quality that should be emphasized and encouraged. Not quite a true "urban center" and yet not quite a "small town," Rockville offers the best of both worlds. The zoning revision should continue to encourage the development of mixed use, urban areas like Twinbrook Metro Area, Rockville Pike, and the Town Center in addition to providing options for neighborhood developments like King Farm. These areas of Rockville will encourage visitors to visit and residents to interact, because there is always something to see or do. On the other hand, the "community feel" of distinct Rockville neighborhoods should be encouraged and maintained. In these neighborhoods, residents should have a pleasant streetscape to encourage walking to community centers and activity areas, where they can foster and maintain personal connection with neighbors.

As discussed in the introduction, zoning is an interdependent system of regulations. Use, shape, and bulk must be considered individually and interactively. Staff recommends that different areas of the city focus on different types of regulations to create an applicable zoning code for Rockville. Some areas may focus more on use regulations while other areas of the city may focus regulations more to form.

After the first meeting of the urban design staff committee, the following general recommendations are submitted for the Mayor and Council's approval:

1. Prioritize "livability" in all zoning revisions. By "livability" staff means to provide:
 - A high quality contextual style of development. In other words, ensure that there is a pleasant street atmosphere, environmentally-friendly development requirements, and flexibility in design options.
 - Walkability and transit options to activity centers containing civic (post office, library, court house) urban (movie theaters, restaurants, etc.) and necessity (grocery store, hardware store, etc.) amenities.
 - Affordable housing and transportation options.
2. Ensure that quality urban design is provided within a walkable radius from metro stations, providing higher density allowances, quality streetscaping (trees,

sidewalks, applicable lighting, pedestrian safety markings, etc.), and a mix of uses.

3. Designate existing neighborhood centers and provide a pleasant atmosphere to connect the neighborhood to them. These centers are the gathering places for neighborhood citizens and provide living necessities like grocery stores, activity centers, and recreation options. Regulations should encourage the continual maintenance and use of these developments. From these centers, spokes providing transportation alternatives should be designated to promote both intra-neighborhood connectivity and inter-neighborhood connectivity.
4. Use street classifications as a regulation tool to ensure that the type of development, streetscaping, and connectivity to amenities are provided. Classification by street types would allow for bike, sidewalk, and vegetative buffer priorities to be coordinated. These valuations may be different for residential versus commercial areas. An example is provided in the Columbia Pike Special Revitalization District Form Based Code attached to this document.
5. Provide changes in the code to allow for flexibility of design. Large-scale commercial developments currently are required to be designed in a campus style arrangement of buildings. Staff would like to encourage other options for development layout.
6. Review parking requirements, in particular, to ensure a pedestrian friendly environment. Some requirements may be more than are necessary with additional transportation alternatives.

IV. CONCLUSION

Rockville is a unique combination of urban and suburban. Zoning amendments should recognize those two aspects and regulate to emphasize the best qualities of these areas to maintain the unique community of the city. Urban design is a tool to produce a "sense of place" in a city and to ensure that development encourages livability. Livability means a quality atmosphere that promotes safety, comfort, and interest. Livability can mean a pleasant streetscape with interesting buildings, storefronts, or street trees. Livability can mean transportation alternatives so that commuters are not stuck in traffic to travel to necessary stores or civic buildings. Livability can also mean affordable housing and a community atmosphere.

While the current code has focused primarily on traditional Euclidian, use centered, zoning regulations, the amendments should incorporate more New Urbanist theories of regulation. In particular form-based zoning would be applicable in certain areas of the city where the design of the building is more important than regulating use. In fact, in certain areas of the city, mixed-use development should be encouraged. Form based regulations can be applied on a street-level basis, depending on the degree of intensity of the street.

Established policies in the Master and neighborhood plans encourage the use of New Urbanist principles but could be strengthened. Rockville's established goals promote the use of zoning regulations which will meet the six principles of urban design: variety of uses, mix of densities, infill activity, contextual design, walkable centers, and enhanced streetscapes. The regulations to be adopted through the zoning revision will implement the City's visions and enhance the existing urban design provisions of the City.

There are a number of regulation options that could be applied to implement the concepts of urban design. The particular regulations will be fleshed out in the language drafting stage of the zoning revision process. As an overall technique, however, Staff recommends reviewing the City's neighborhoods individually to determine the best means of implementing urban design principles throughout the City. For more commercial centers and neighborhood community areas, the key to urban design may be new form-based zoning regulations with an emphasis on street connectivity. Residential neighborhoods, however, may adopt floating or overlay requirements to promote a particular character of the neighborhood. While the revision may include distinct regulations for residential neighborhoods, and others for the Town Center, Twinbrook Metro Area, and Rockville Pike, the overarching goal for each district will be to promote livability.

V. ATTACHMENTS:

1. The Columbia Pike Special Revitalization District Form Based Code, Arlington, Virginia, adopted 2/25/03 and amended 2/10/04.
2. Maryland Department of Planning, Managing Maryland's Growth: Models and Guidelines for Infill Development, Section V, "Model Ordinance," October 2001.
3. Katz, Peter, "Form First: The New Urbanist Alternative to Conventional Zoning," APA, Planning, November 2004.
4. Hinshaw, Mark, "The Case of True Urbanism: Who Needs New Urbanism When Cities Have Got Something Much Better?," APA, Planning, June 2005.
5. Map "Areas in Rockville Which Are within Walking Distance of Transit," City of Rockville, May 2001.
6. City of Rockville Pedestrian Policies, Working Draft, August 2004.
7. Town Center Master Plan Design Guidelines
8. Rockville Pike Design Guidelines
9. Memo to Bob Spalding from Randy Clay, "Sidewalk Design Standards," August 26, 2004.
10. Pauvier, Cy, Creating a Vibrant City Center, "Chapter 7: Pedestrian Realm" pgs. 81-91.

The Columbia Pike Special Revitalization District Form Based Code

Section 20 (Appendix A) of the Zoning Ordinance,
"CP-FBC" Columbia Pike - Form Based Code Districts

Principles and Regulations
Regulating Plans
Building Envelope Standards
Streetscape Standards
Architectural Standards



ADOPTED 2/25/03

AMENDED 2/10/04

2

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I. Components of the Code

The ***Columbia Pike Special Revitalization District Form Based Code*** is designed to foster a vital main street for its adjacent neighborhoods through a lively mix of uses—with shopfronts, sidewalk cafes, and other commercial uses at street level, overlooked by canopy shade trees, upper story residences and offices.

Redevelopment within the ***Columbia Pike Special Revitalization District*** may be regulated by the ***Columbia Pike Special Revitalization District Form Based Code***, in order to achieve Arlington County's vision set forth in the *Columbia Pike Initiative—A Revitalization Plan*, adopted by the County Board on March 12, 2002, the subsequent Columbia Pike Urban Design Charrette and citizen workshops held in September 2002, and any other future addenda.

While the ***Columbia Pike Special Revitalization District Form Based Code*** provides a citizen-endorsed urban design for the improvement of all properties in designated areas, configurations shown for the Bus Rapid Transit/Light Rail Transit (BRT/LRT) systems are shown only for illustrative purposes and no commitment has yet been made by Arlington County and/or a transit service operator.

The ***Columbia Pike Special Revitalization District Form Based Code*** (otherwise referred to herein as "the **Form Based Code**" or "the Code") is a legal document that regulates land-development, setting careful and clear controls on building form—with broad parameters on building use—to shape clear public space (good streets, neighborhoods and parks) with a healthy mix of uses. With proper urban form, a greater integration of building uses is natural and comfortable. The **Form Based Code** uses simple and clear graphic prescriptions and parameters for height, siting, and building elements to address the basic necessities for forming good public space.

Wherever there appears to be a conflict between the ***Columbia Pike Special Revitalization District Form Based Code***, Section 20 of the *Arlington County Zoning Ordinance*, and other sections of the Zoning Ordinance (as applied to a particular development), the requirements specifically set forth in the **Form Based Code** shall prevail. For development standards not covered by the **Form Based Code**, the other applicable sections in the *Arlington County Zoning Ordinance* shall be used as the requirement. Similarly, all development must comply with all relative Federal, State or local regulations and ordinances including, but not limited to, the *Chesapeake Bay Ordinance* and other environmental regulations.

The ***Columbia Pike Special Revitalization District Form Based Code*** is comprised of: **Definitions**, the **Regulating Plans**, the **Building Envelope Standards**, the **Streetscape Standards** and the **Architectural Standards**.

Definitions

Certain terms in the Code are used in very specific ways, often excluding some of the meanings of common usage. Wherever a word is in SMALL CAPITAL LETTERS format, consult the **Definitions** for the specific meaning. Words used in the **Form Based Code**, but not defined by the **Form Based Code**, that are defined in the Arlington County Zoning Ordinance shall have the meanings set forth therein.

The Regulating Plan

The **REGULATING PLAN** is the coding key for the Columbia Pike **Form Based Code** that provides specific information on permitted development for each building site. The **REGULATING PLAN** also shows how each LOT relates to public spaces (**STREETS**, **CIVIC GREENS**, **PEDESTRIAN PATHWAYS**, etc.) and the surrounding neighborhood. There may be additional regulations for LOTS in special locations/situations as identified in the **REGULATING PLAN**.

The Building Envelope Standards

The **BUILDING ENVELOPE STANDARDS** establish basic parameters governing building form, including the envelope for building placement (in three dimensions) and certain permitted/required building elements, such as storefronts, **BALCONIES**, and **STREET WALLS**. The **BUILDING ENVELOPE STANDARDS** establish both the boundaries within which things may be done and specific things that must be done. The applicable standard for a building is determined by its **STREET FRONTAGE** contained in the **REGULATING PLAN**. This produces a coherent **STREET** and allows the building greater latitude behind its street facade.

The intent of the **BUILDING ENVELOPE STANDARDS** is to shape a vital public space (Columbia Pike and its adjoining **STREETS**) through placement and envelope controls on private buildings. They aim for the minimum level of control necessary to meet that goal.

The Streetscape and Architectural Standards

The purpose of the **Streetscape Standards** is to ensure coherent **STREETS** and to assist builders and owners with understanding the relationship between the public space of Columbia Pike and their own building. These standards set the parameters for planting trees and/or other amenities on or near each building site.

The goal of the **Architectural Standards** is a coherent and pleasing architectural character that is complementary to the best local traditions. The **Architectural Standards** govern a building's architectural elements regardless of its **BUILDING ENVELOPE STANDARD** and set the parameters for allowable materials, configurations, and construction techniques. Equivalent or better products (as determined by the **ADMINISTRATIVE REVIEW TEAM**) than those specified are always encouraged and may be submitted for approval to the County.

II. Definitions

The following terms are defined for the purpose of the **Columbia Pike Special Revitalization District Form Based Code**, Section 20 of the *Arlington County Zoning Ordinance*. Terms not defined here may be defined elsewhere in the Zoning Ordinance. In such case, the definition contained in the Zoning Ordinance will be used. Certain terms in the **Form Based Code** are used in very specific ways, often excluding some of the meanings of common usage. Wherever a word is printed in SMALL CAPITAL LETTERS, it is being used as defined herein.

ACCESSORY UNIT

A building (maximum floor area of 650 square feet) that is not the primary structure, located on a LOT that can be used as additional residential or home occupation space by the owner of the primary structure.

ADMINISTRATIVE REVIEW TEAM

The County staff that has been designated to review **Form Based Code** applications. The team will consist of representatives from the Department of Community Planning, Housing & Development, including planning and historic preservation; the Department of Environmental Services; and, Arlington Economic Development. The Columbia Pike Coordinator will be designated as a Deputy Zoning Administrator and shall play the lead role on the ADMINISTRATIVE REVIEW TEAM. Additional staff resources from other departments and areas may also be involved as determined necessary by the County Manager or the ADMINISTRATIVE REVIEW TEAM. Designating the Columbia Pike Coordinator as a Deputy Zoning Administrator will provide the appropriate level of legal authority to the ADMINISTRATIVE REVIEW TEAM.

ALLEY

The public right of way for vehicles and pedestrians within a BLOCK that provides access to the rear of buildings, vehicle parking (e.g., garages), utility meters, and recycling and garbage bins.

AVENUE BUILDING

Building types as defined in the BUILDING ENVELOPE STANDARDS for AVENUE SITES.

AWNING

A cantilevered, projected or suspended cover over the sidewalk portion of the STREET. Also, roof-like coverings, usually of canvas or metal and often adjustable, placed over the sidewalk, windows, or doors to provide protection from sun and rain.

BALCONY

An exterior platform attached to the front of a main building (on and forward of its REQUIRED BUILDING LINE or STREET side). BALCONIES, where required in the BUILDING ENVELOPE STANDARDS, must be roofed and enclosed by balustrades (railings) and posts that extend up to the roof. BALCONIES aligned vertically on adjacent floors may post up to one another and share a single roof element. BALCONIES may not project within 5 feet of a property line.

BAY OR BAY WINDOW

Generally, a U-shaped enclosure, extending the interior space of the building outward of the exterior BUILDING WALL/RBL (along its STREET side). Minimum interior clear width at main wall of 4 feet; projection not greater than 36 inches beyond the RBL; walls and windows shall be between 90 degrees (perpendicular) and 0 degrees (parallel) relative to the primary wall from which they project.

BLOCK

An increment of land comprised of LOTS, ALLEYS, and tracts circumscribed and not traversed by STREETS (PEDESTRIAN PATHWAYS excepted). BLOCKS shall be measured at the frontage LOT lines (along the REQUIRED BUILDING LINE).

BLOCK CORNER

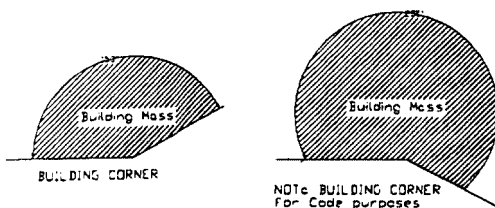
This refers to the outside corner of a BLOCK at the intersection of any two STREETS. Some of the requirements of the BUILDING ENVELOPE STANDARDS are specific to BLOCK CORNERS. Inside corners, where the resulting angle formed by the BLOCK face is less than 180 degrees (concave), are not considered BLOCK CORNERS for the purposes of this Code.

BUILDABLE AREA

The area of the LOT that building(s) may occupy. The BUILDABLE AREA sets the limits of the building footprint now and in the future—additions to structures must be within the designated area.

BUILDING CORNER

This refers to the outside corner of a building where the primary building mass is within an angle less than 180 degrees. Some of the proscriptions of the BUILDING ENVELOPE STANDARDS are specific to BUILDING CORNERS. Inside corners, where the exterior space of the building mass forms an angle of more than 180 degrees, are not considered BUILDING CORNERS for the purposes of this Code.



BUILDING ENVELOPE STANDARDS (BES)

The part of the Code that establishes basic parameters regulating building form, including the envelope, placement (in three dimensions) and certain permitted/required building elements, such as storefronts, BALCONIES, and STREET WALLS. The BUILDING ENVELOPE STANDARDS establish both the boundaries within which things may be done and specific things that must be done. The applicable BES for a site is determined by its STREET FRONTAGE as per the REGULATING PLAN. This produces a coherent STREET and allows the building greater latitude behind its street facade.

CIVIC GREEN OR SQUARE

Public spaces located within the **Columbia Pike Special Revitalization District** as designated on the REGULATING PLAN. The term SQUARE is generally used to describe spaces that have more paved surface area. The term CIVIC GREEN is generally used to describe a formally configured, small public lawn or park that is primarily unpaved. Both shall have at least 60 percent of their perimeter fronting rights of way and both spaces should be surrounded by STREET TREES. Their dimensions shall be no narrower than a 1:4 ratio, and no SQUARE or CIVIC GREEN width or breadth dimension shall be less than 25 feet. Situated at prominent locations within the **Columbia Pike Special Revitalization District** and often dedicated to important events or citizens (with PUBLIC ART), CIVIC GREENS and SQUARES shall not include active recreation structures such as ball fields and courts, but may include temporary ice skating rinks. See the **Streetscape Standards** for the specific controls on SQUARES and CIVIC GREENS.

CIVIC USE

Community uses including: meeting halls; libraries; schools; police and fire stations; post offices (retail operations only, no primary distribution facilities); places of worship; museums; cultural, visual and performing art centers; transit centers; government functions open to the public; and, other uses as determined by the Zoning Administrator.

CIVIC BUILDINGS

Those buildings that house CIVIC USES located on the sites designated on the REGULATING PLAN. CIVIC BUILDINGS and PUBLIC ART are situated at prominent locations within the **Columbia Pike Special Revitalization District**. Publicly owned CIVIC BUILDINGS and publicly owned PUBLIC ART are not subject to the BUILDING ENVELOPE STANDARD prescriptions of this Code.

COMMON LOT LINES

LOT lines shared by adjacent private LOTS.

DORMERS

Small, roofed ancillary structures with windows providing light and air to occupiable space within the roof. DORMERS are permitted and do not constitute a STORY so long as they do not break the primary EAVES line, are individually less than 15 feet wide, and are collectively not more than 60 percent of the unit's REQUIRED BUILDING LINE facade.

EAVE HEIGHT

Where used to limit building height in the Code, EAVE height shall be measured at the bottom of the top layer of roofing material at its outermost point from the building wall.

FENESTRATION

An opening in the building wall allowing light and views between interior and exterior. FENESTRATION is measured as glass area (excluding window frame elements with a dimension greater than 1 inch) for conditioned space and as open area for parking structures or other un-conditioned, enclosed space.

GARAGE ENTRY

An opening (with curb cut) in the building façade and/or STREET WALL where vehicles may enter into the BLOCK interior for general parking and business servicing. GARAGE ENTRYS (excluding those existing prior to December 31, 2002) shall not exceed 16 feet clear height and 24 feet clear width and shall not be sited within 100 feet of the BLOCK CORNER or another GARAGE ENTRY on the same BLOCK. GARAGE ENTRY portals may be set back up to 24 inches behind the surrounding façade.

GARDEN WALL

A masonry wall defining a REQUIRED BUILDING LINE, property line or delineating a private area. Shall be set back (or forward) not more than 8 inches from the alignment specified in the REGULATING PLAN or BES. A vehicle entry gate (opaque and maximum 12 feet wide) and a pedestrian entry gate (maximum 6 feet wide) are both allowed as limited substitutions within any required GARDEN WALL length.

GROUND FLOOR, GROUND STORY

The first level of MAIN STREET and LIVE/WORK SITE buildings where at least 80 percent of the finished floor elevation is within 18 inches of the adjacent fronting sidewalk level. The next STORY above the GROUND STORY is the second floor. (When a residential use occupies the GROUND FLOOR it shall be 30 to 60 inches above the fronting sidewalk elevation, as indicated in the BUILDING ENVELOPE STANDARDS.)

HISTORIC FACADES

The facades of buildings that have historic value as designated in this Code and/or are identified on the REGULATING PLAN or designated by the County as historic landmarks or structures pursuant to Section 31A of the Zoning Ordinance. HISTORIC FACADES shall be preserved.

HISTORIC PRESERVATION

HISTORIC PRESERVATION can be conducted through two means: a preservation easement on the structure or façade can be recorded with the Northern Virginia Conservation Trust or the site can be designated as a local historic landmark by the Arlington County Board.

HISTORIC STRUCTURES

Those buildings of historic value as designated in this Code and/or are identified on the REGULATING PLAN or designated by the County as historic landmarks or structures pursuant to Section 31A of the Zoning Ordinance. HISTORIC STRUCTURES shall be preserved.

LIVE/WORK

A structure that is specifically built (or altered) to accommodate retail or office commercial uses on the GROUND FLOOR and residential uses on the upper floors. Both the lower and upper levels may be occupied by the same user; however, it is not a requirement for this designation.

LOCAL STREET BUILDING

Buildings as defined in the BUILDING ENVELOPE STANDARD for LOCAL STREET SITES.

LOT

A designated parcel, tract or area of land having its principal frontage upon a STREET or a place permitted under the subdivisions ordinance and established by plat or subdivision or as otherwise permitted by law to be used, developed or built upon as a unit.
(Ord. No. 90-14, 6-28-90)

MAIN STREET BUILDING

Buildings as defined in the BUILDING ENVELOPE STANDARD for MAIN STREET SITES.

NEIGHBORHOOD STREET BUILDING

Buildings as defined in the BUILDING ENVELOPE STANDARD for NEIGHBORHOOD STREET SITES.

PARAPET

Where used to limit building height in the Code, PARAPET height shall be measured at the top of the PARAPET, including any coping. An additional 3 feet in height by 12 feet in width (or 15 percent of the façade, whichever is greater) is permitted for a section of the PARAPET emphasizing the building's main STREET entry or a BLOCK CORNER. Any variations regarding building heights should be reviewed under the Use Permit Option with the County Board making the final determination.

PARKING, RESERVED

Parking not available to the public, but only to specifically identified users (either a single user per space or a set of users for a group of spaces), whether for free or at a fee that shall not exceed the prevailing market rate.

PARKING, SHARED

Parking available to the public on an unreserved basis for free or at the same fee for all users, which shall not exceed the prevailing market rate. Time limits may be imposed to ensure turn-over. Hours of public availability may also be restricted.

PEDESTRIAN PATHWAY

Interconnecting paved ways that provide pedestrian and bicycle passage through BLOCKS running from a STREET to either a STREET, ALLEY or an interior BLOCK parking area. The area within a PEDESTRIAN PATHWAY shall be a public access easement or public right of way. The easement width for these pathways shall not be less than 20 feet with a paved walkway not less than 10 feet wide, except where otherwise specified on the REGULATING PLAN, and shall provide an unobstructed view straight through their entire length.

PRIVACY FENCE

An opaque fence made of wood or masonry (not chain link or any other type of rolled fence) along ALLEYS and COMMON LOT LINES (where more than 10 feet away from the REQUIRED BUILDING LINE). PRIVACY FENCES shall be 7 feet tall, as measured from the adjacent ground.

PUBLIC ART

Art that is visually or physically accessible to the public and that is acquired by County funds, donated to the County, or provided by a private entity as a community benefit. PUBLIC ART encompasses the broadest definition of visual art including the imaginative use and interplay of artistic disciplines.

REGULATING PLAN

Part of the Code that is the coding key for the BUILDING ENVELOPE STANDARDS that provide specific information for the disposition of each building site. The REGULATING PLAN also shows how each site relates to adjacent STREETS, the overall **Columbia Pike Special Revitalization District**, and the surrounding neighborhood.

REQUIRED BUILDING LINE (RBL)

The building shall be built-to the REQUIRED BUILDING LINE (RBL) as shown on the REGULATING PLAN. The RBL is a requirement, not a permissive minimum as is a set-back. The RBL for each site is shown on the applicable REGULATING PLAN. The minimum length of building that is required to be built-to the RBL is shown on the appropriate BUILDING ENVELOPE STANDARD.

SIDEWING

The portion of a building extending along a side LOT line toward the ALLEY or rear of the LOT.

STOOP

An entry platform on the RBL side of a building. STOOPS may be roofed, but they shall not be enclosed.

STORY, STORY HEIGHT

That space within a building, and above adjacent RBL elevation, that is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above. STORY HEIGHT parameters are as specified by the appropriate BUILDING ENVELOPE STANDARD.

STREET

Includes all public space (STREETS, SQUARES, PEDESTRIAN PATHWAYS, CIVIC GREENS, parks)—including any transit service operator passenger platform—but not GARAGE ENTRYS or ALLEYS.

STREET FRONTAGE

The LOT line coincident with the RBL or that portion of the building that is coincident with the RBL as required by the Code.

STREET LIGHT

A luminaire installed on both sides of STREETS, along the STREET TREE ALIGNMENT LINE, unless otherwise designated on the REGULATING PLAN, at intervals of no more than 60 feet, measured parallel to the STREET. STREET LIGHTS shall be between 9 and 16 feet above ground in height. Lighting standards for STREETS and ALLEYS should be developed to meet the minimum standards of the *Illumination Engineering Society* (with the design criteria giving equal weight to the lighting of the pedestrian areas and the automobile areas).

STREETSCAPE

Improvements to a property, including paving, tree and/or other decorative plantings, lighting, and the placement of street furniture, within the STREET.

STREET TREE

A deciduous canopy shade tree as required per the REGULATING PLAN and listed in the **Form Based Code** STREET TREE LIST. STREET TREES shall be of a proven hardy and drought tolerant species, large enough to form a canopy with sufficient clear trunk to allow traffic to pass under unimpeded. STREET TREES shall be planted and spaced 25 to 30 feet on center. Where necessary, spacing allowances may be made to accommodate curb cuts, fire hydrants and other infrastructure elements. At no time may spacing exceed 45 feet on center.

STREET TREE ALIGNMENT LINE

A line along which STREET TREES are to be planted. The STREET TREE ALIGNMENT LINE is parallel with the STREET or SQUARE right of way and, unless otherwise specified in the appropriate REGULATING PLAN, is 4 feet from the back of the curb. (Existing trees are not required to be relocated by this requirement.)

STREET WALL

A masonry wall set back (or forward) not more than 8 inches from the RBL or adjacent building façade and built to the height specified in the BUILDING ENVELOPE STANDARDS. A vehicle entry gate (opaque, maximum 18 feet wide) and a pedestrian entry gate (maximum 6 feet wide) are both allowed as limited substitutions within any required STREET WALL length.

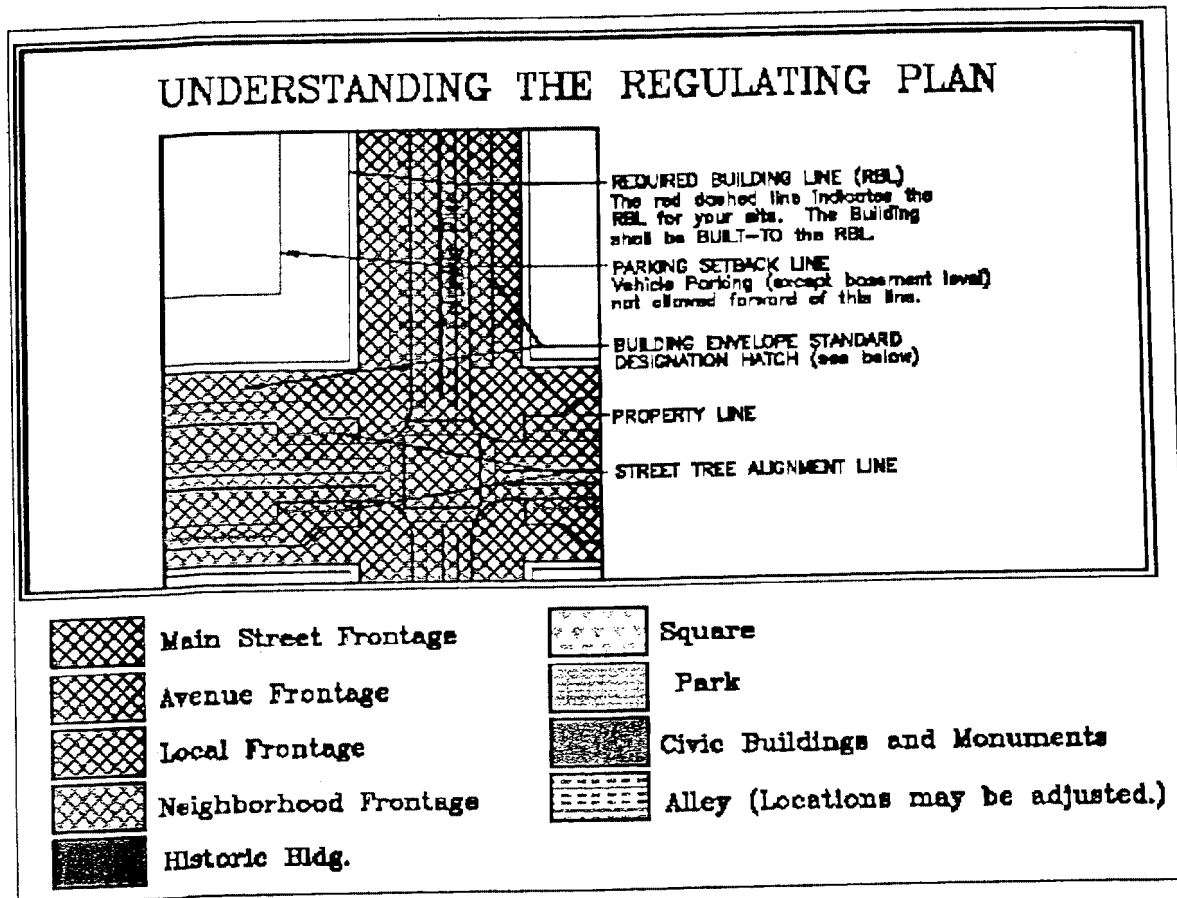
"WHERE CLEARLY VISIBLE FROM THE STREET"

Many requirements of the Code apply only where the subject is "CLEARLY VISIBLE FROM THE STREET." Note that the definition of STREET includes SQUARES, CIVIC GREENS, parks, and all public space except ALLEYS. A building element more than 30 feet from the RBL/STREET (such as items facing a COMMON LOT LINE more than 31 feet away from a RBL and/or STREET) is by definition NOT CLEARLY VISIBLE FROM THE STREET. Also common and/or party walls are by definition NOT CLEARLY VISIBLE FROM THE STREET.

III. The Regulating Plans

A. Understanding the REGULATING PLAN

A REGULATING PLAN provides standards for the disposition of each property or LOT and how each relates to its adjacent properties and STREETS. Following the adoption of the **Columbia Pike Initiative—A Revitalization Plan** in March 2002 and the Columbia Pike Urban Design Charrette and citizen planning workshops held in September 2002 and any future addenda, REGULATING PLANS have been produced for the **Columbia Pike Special Revitalization District** in Arlington County.



BUILDING SITES ARE CODED BY THEIR STREET FRONTAGE

The key above explains the elements of the REGULATING PLAN and serves as a reference when examining the REGULATING PLAN.

The REGULATING PLAN is the principal tool for implementing the ***Columbia Pike Special Revitalization District Form Based Code*** and identifies the basic physical characteristics of each building site and the BUILDING ENVELOPE STANDARD (BES) assigned to it.

B. Rules for New Development Plans

1. BLOCKS/ALLEYS

- A. All LOTS shall share a frontage line with a STREET.
- B. All LOTS and/or all contiguous LOTS shall be considered to be part of a BLOCK for this purpose. No BLOCK face shall have a length greater than 400 feet without an ALLEY, common access easement or PEDESTRIAN PATHWAY providing through-access to another STREET, ALLEY or common access easement, STREETS, or conservation restricted land. Individual LOTS with less than 75 feet of frontage are exempt from the requirement to interrupt the BLOCK face; those with over 250 feet of frontage shall meet the requirement within their LOT.
- C. ALLEYS shall provide access to the rear of all LOTS. ALLEY construction is required as part of the redevelopment project within the rear setback, unless an ALLEY already exists.
- D. Where an ALLEY does not exist and is not constructed at the time of redevelopment of any property, the developer is required to dedicate the ALLEY right of way within the rear setback to the County, and until the County builds the ALLEY, maintain the area within the rear setback by, at a minimum:
 - 1. Sodding and providing routine landscape maintenance to the area.
 - 2. Keeping the area clear of debris, stored materials, and vehicles.
- E. Curb Cuts shall be limited to no more than one per 200 feet of STREET FRONTAGE on MAIN STREET and AVENUE SITES.

2. BUILDINGS

- A. The hierarchy of BUILDING ENVELOPE STANDARDS (BES), in descending order is: MAIN STREET SITES, AVENUE SITES, LOCAL SITES, NEIGHBORHOOD SITES.
- B. The maximum building floor-plate (footprint) is 30,000 square feet; beyond that limit a special exception is necessary. Large grocery stores may have a maximum GROUND FLOOR floorplate of 50,000 square feet.
 - 1. For each BLOCK, building(s) along the RBL shall present a complete and discrete vertical façade composition (e.g., a new façade design) at a maximum average STREET frontage length of 60 feet. Each façade composition shall include a functioning, primary STREET entry. (This may be satisfied through the use of shops for large floor-plate buildings.) Individual in-fill projects on LOTS with frontage of less than 100 feet are exempted from this requirement.

C. Consistent BUILDING ENVELOPE STANDARD (BES) sites shall front one another across STREETS. When separated by a SQUARE, CIVIC GREEN or park, building types from adjacent levels (one level difference) may face one another, unless otherwise indicated on the REGULATING PLAN. For example, LOCAL SITES may face NEIGHBORHOOD SITES and/or AVENUE SITES across a CIVIC GREEN—but may not face MAIN STREET SITES, unless otherwise indicated on the REGULATING PLAN.

D. When separated by an ALLEY, common access easement, COMMON LOT LINE and/or when fronting different STREETS (e.g., a corner LOT and its adjacent LOT), BUILDING ENVELOPE STANDARD types from any category may sit adjacent or share a COMMON LOT LINE, provided that they do not face across a STREET, unless otherwise indicated on the REGULATING PLAN.

E. When the BUILDING ENVELOPE STANDARD designation changes along a property frontage, the property owner has the option of applying either BUILDING ENVELOPE STANDARD (BES) for a maximum additional distance of 50 feet in either direction along that frontage.

3. STREETSCAPE

A. STREET TREES shall be planted at the time of development and spaced 25 to 30 feet on center. Where necessary, spacing allowances may be made to accommodate curb cuts, fire hydrants and other infrastructure elements.

B. STREET LIGHTS shall be installed on both sides of streets along the STREET TREE ALIGNMENT LINE and unless otherwise designated on the REGULATING PLAN, at no more than 60 foot intervals measured parallel to the STREET. At the time of development, the developer is only responsible for the installation of STREET LIGHTS on the side(s) of the STREET being developed.

C. At the time of development, the developer is required to install sidewalks. Sidewalks shall not be constructed entirely of plain poured concrete. A variety of paving materials, textures, and colors are encouraged. Consistency of paving design is required within a project and within a BLOCK.

4. PARKING

A. Parking goals:

- Enable people to park once at a convenient location and to access a variety of commercial enterprises in pedestrian friendly environments by encouraging SHARED PARKING.
- Reduce diffused, inefficient, single-purpose reserved parking.
- Avoid adverse parking impacts on neighborhoods adjacent to redevelopment areas.
- Maximize on-street parking.
- Increase visibility and accessibility of parking.

- Provide flexibility for redevelopment of small sites and for the preservation of historic buildings.
 - Promote early prototype projects using flexible and creative incentives.
- B. Sites under 20,000 square feet in land area have no minimum parking requirements.
- C. Sites over 20,000 square feet in land area have the following requirements.
1. A minimum of 1 and 1/8 parking space per residential unit, of which a minimum of 1/8 parking space per residential unit shall be provided as shared parking. There are no maximum limits on SHARED PARKING.
 2. A minimum of one space per 1,000 square feet of non-residential Gross Floor Area (GFA) shall be provided as SHARED PARKING; there are no set maximum limits on SHARED PARKING. New on-street parking spaces created in conjunction with the development, which did not previously exist, may be counted toward the minimum requirement for SHARED PARKING. Any limitations on the SHARED PARKING (time limits or hours of the day) shall be subject to approval by the Zoning Administrator which shall be given upon a finding that at least 12 hours of public parking are provided in any 24-hour period and that at least 8 of those hours are provided during either business or nighttime hours depending whether the Zoning Administrator determines that the primary public use will be for commercial or residential uses.
 3. A maximum of one space per 1,000 square feet of non-residential GFA or two spaces per residential unit may be made available for RESERVED PARKING.
 4. RESERVED PARKING above the maximum may be provided upon payment to the County. The County Manager shall establish the amount of payment annually based on the approximate cost to build structured parking.
- D. Achieving parking requirements:
1. Parking requirements may be met either on-site or within the parking zone in which the development is located.
 2. In lieu of minimum parking requirements, the County may accept a one-time payment per each space of SHARED PARKING. The County Manager shall establish the amount of payment annually based on the approximate cost to build structured parking.
 3. Incentives from the *Tax Increment Public Infrastructure Fund* (TIPIF) may be used, in accordance with approved TIPIF policy, for eligible projects to meet SHARED PARKING requirements.

E. Bicycle Parking:

1. For office development, the developer must provide 1 employee bicycle parking rack (2-bike capacity) per 7,500 square feet of GFA and 1 visitor/customer bicycle parking rack (2-bike capacity) per 20,000 square feet of GFA.
 2. For residential development, the developer must provide 1 tenant bicycle parking rack (2-bike capacity) per 10 units and 1 visitor bicycle parking rack (2-bike capacity) per 50 units.
 3. For retail development, the developer must provide 1 employee bicycle parking rack (2-bike capacity) per 5,000 square feet of GFA and 1 visitor/customer bicycle parking rack (2-bike capacity) per 12,500 square feet of GFA.
 4. All bicycle parking facilities are to be highly visible to intended users and protected from rain and snow within a structure. The bicycle parking facilities shall not encroach on any area in the public right of way intended for use by pedestrians, nor shall they encroach on any required fire egress.
 5. On-street bicycle parking spaces (as defined in VI.G, page 51) may be counted toward the minimum customer/visitor bicycle parking requirement.
- F. SHARED PARKING shall be designated by appropriate signage and markings as required by County policy.

5. RETAIL

Generally, retail is required on the GROUND STORY of MAIN STREET SITES and, to a lesser degree on LOCAL SITES. The inclusion of retail enlivens the STREET and creates a purpose for being there.

Unless otherwise noted, retail is an inclusive phrase that encompasses consumer comparison goods (general merchandise, apparel, furnishings and other types of similar merchandise—commonly referred to as GAFO categories in the retail industry—convenience goods, food/delis, gifts, drugstore items, personal care, cards/stationery), personal business service professional offices, restaurants, grocery stores, and hotel, theater, and other uses that provide visual interest and create active street life. Other uses, which in the judgement of the Zoning Administrator are of the same general character as those listed below and will not be detrimental to the district in which it is to be located, may be allowed.

- **Primary Retail Uses:** Generally, uses that provide entertainment or leisure activities, promote high walk-in customer counts, or are shopping destinations.
- **Secondary Retail Uses:** Generally, uses that provide personal or business services.

Primary Retail	
Art or antique shop, including art work, art supplies and framing materials	Meat or fish market
Bakery	Newsstand
Pet shop	Nursery, flower, or plant store
Book, stationery, or card store	Optical store (operating as a commercial enterprise with incidental eye exam)
Clothing shop	Restaurant
Coffee shop	Secondhand or consignment shop
Delicatessen	Shoe store
Department, furniture, home furnishings, or household appliance store	Specialty food store (fish market, breads, pastries, wine, etc.)
Drugstore	Sporting goods store
Dry goods or notion store	Variety store
Florist or gift shop	DVD/Video tape or record store
Grocery, fruit, or vegetable store	Day spa
Hardware, paint, or appliance store	Electronics store
Hobby or handcraft store	*With Special Exception Use Permit
Ice cream or confectionery store	Amusements
Indoor theaters	Bowling alley
Interior decorating store (with incidental interior service)	Nightclubs and restaurants with live entertainment or dancing
Jewelry store	Restaurant with drive-through window
Leather goods/luggage	Self-storage facilities

Secondary Retail	
Animal hospital or veterinary clinic within a fully enclosed structure	Private postal service
Automobile rental (retail functions only—no auto servicing) or automobile accessories and supplies (excluding installation)	Shoe or small appliance repair shop
Bank or other financial institution (including check cashing)	Tailor or dressmaker
Barbershop or beauty salon	Tax service
Blueprinting, photostatting, or photo copy service	Trade or commercial school
Business college operated as a commercial enterprise	Photo studio
Catering establishment	Sign painting shop
Clothes cleaning or laundry establishment	Trade or commercial school
Dance studio	
Employment agencies	*With Special Exception Use Permit
Film processing or film exchange	Audio-visual production studio
Health club	Automobile service station
Insurance sales	Carpet and rug cleaning (excluding dying)
Locksmith	Food delivery service
Medical or dental offices, clinics or laboratories	Miniature golf course
Music conservatory or music instruction	Mortuary or funeral home
Office (such as real estate broker, travel agency, medical, etc)	Tire shop
Palmistry	Upholstery shop
Pawnshop	
Photo studio	
Printing, lithographing, or publishing	

6. HISTORIC PRESERVATION

Certain HISTORIC STRUCTURES and HISTORIC FACADES are viewed as integral to the current and future identity of Columbia Pike. These historic resources are to be preserved (see HISTORIC PRESERVATION, pg. 6) through the use of local incentives, as well as Federal and/or State Historic Tax Credits.

HISTORIC STRUCTURES

Sites containing HISTORIC STRUCTURES may be redeveloped under the Code subject to any special provisions that apply to the site in the REGULATING PLAN and administrative review by the Arlington Historical Affairs and Landmark Review Board (HALRB). When located on any site that is redeveloped pursuant to this Code, HISTORIC STRUCTURES shall be preserved (see HISTORIC PRESERVATION, pg. 6) in their entirety and shall not be subject to the BUILDING ENVELOPE STANDARD prescriptions of this Code.

The following properties are HISTORIC STRUCTURES

- 2338-2344 and 2408 Columbia Pike, commercial buildings
- 2500-2530 Columbia Pike, Arlington Village Shopping Center
- 2624 Columbia Pike, Arlington Animal Hospital
- 2628 Columbia Pike, Birds N' Things
- 2900 Columbia Pike, Old Dominion Bank/Blanca's Restaurant
- 2903 Columbia Pike, Arlington Theater
- 3014 Columbia Pike, Charles Building
- 805 South Walter Reed Drive, Fillmore Gardens Apartments *(The portion of the property south of 9th Street may be redeveloped, on the condition that preservation (see HISTORIC PRESERVATION, pg. 6) is implemented for the portion north of 9th Street.)*

HISTORIC FACADES:

Sites incorporating HISTORIC FACADES may be redeveloped under the Code subject to any special provisions that apply to the site in the REGULATING PLAN or in this section and administrative review by the Arlington Historical Affairs and Landmark Review Board (HALRB). When located on any site that is redeveloped pursuant to this Code, HISTORIC FACADES shall be preserved (see HISTORIC PRESERVATION, pg. 6) and shall not be subject to the BUILDING ENVELOPE STANDARD prescriptions of this Code.

The following properties contain HISTORIC FACADES:

- 2801-2811 Columbia Pike and 927 South Walter Reed, Elkins Building
- 900 block of South Walter Reed Drive, commercial buildings
- 2906-2922 Columbia Pike, Arlington Hardware

In order to better incorporate HISTORIC STRUCTURES and HISTORIC FACADES into redevelopment scenarios, the following are allowable modifications to the **Form Based Code** requirements.

- HISTORIC STRUCTURES and HISTORIC FAÇADE buildings have no minimum parking requirements (redevelopment is not required to obtain this exemption).
- Redevelopment projects incorporating HISTORIC STRUCTURES and HISTORIC FACADES are exempt from the County's parking requirements for that portion of the project that includes the historic property.
- Siting and elements requirements of the BUILDING ENVELOPE STANDARDS can be modified for that portion of any redevelopment project that includes a HISTORIC STRUCTURE or HISTORIC FAÇADE that is preserved.

Optional exceptions:

1. Two additional STORIES are permitted on the remainder of the site, provided overall building height is within the maximum (in feet) for the site.

For example, on a MAIN STREET SITE, the maximum height is 6 STORIES, the equivalent to 94 feet under the **Form Based Code**. (Maximum floor heights are 24 ft., 14 ft., 14 ft., 14 ft., 14 ft., 14 ft.) So an additional two STORIES are permitted, but overall building height cannot exceed 94 feet.

2. Developers are exempted from constructing certain STREETScape improvements, including:
 - Utility undergrounding
 - Provision of street furniture
 - Provision of PUBLIC ART
 - Provision of CIVIC GREENS and SQUARES

Developers are required to obtain a Certificate of Appropriateness from the Historical Affairs and Landmarks Review Board (HALRB) for projects involving the identified HISTORIC STRUCTURES and HISTORIC FACADES listed above prior to application submission.

7. PUBLIC IMPROVEMENTS

Within the **Columbia Pike Special Revitalization District**, the developer/property owner is required to construct and maintain all STREETSCAPE improvements according to the **Streetscape Standards** in Section V as part of the redevelopment project.

Examples of STREETSCAPE improvements required as part of redevelopment include:

- Installing sidewalks, to include curbs and gutters, as indicated by the REGULATING PLAN and **Typical Street Cross Section**.
- Undergrounding utilities, where not already done.
- Installing street furniture: benches, trash receptacles, bicycle racks, etc.
- Installing STREET TREES and STREET LIGHTS as prescribed herein.
- Constructing other public spaces, such as GREENS and SQUARES or ALLEYS, where indicated on the REGULATING PLAN.
- Dedicating public access easements.
- Providing PUBLIC ART, as indicated in the *Public Art Master Plan* (when adopted).

C. REGULATING PLANS

The following pages contain the REGULATING PLANS for the Columbia Pike Revitalization Districts.

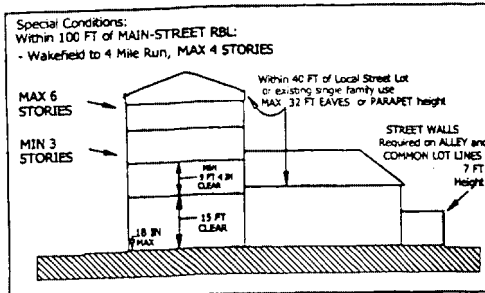
IV. Building Envelope Standards

The REGULATING PLAN identifies the BUILDING ENVELOPE STANDARDS (BES) for all building sites within the **Columbia Pike Revitalization District**. The goal of the BUILDING ENVELOPE STANDARDS is the creation of a healthy and vital public realm through good STREET space. Deviations from the BUILDING ENVELOPE STANDARDS can be approved through a Special Exception Process as provided for in the **Chapter VII. Administration** of this Code and in Sections 20 and 36 of the Zoning Ordinance. The BUILDING ENVELOPE STANDARDS set the basic parameters governing building construction, including the building envelope (in three dimensions) and certain required/permitted elements, such as BALCONIES, STOOPS, and STREET WALLS.

A. General Guiding Principles

1. Buildings are aligned and close to the STREET.
Buildings form the space of the STREET.
2. The STREET is a coherent space, with consistent building forms on both sides of the STREET.
This agreement of buildings facing across the STREET contributes to a clear public space and community identity.
3. Buildings oversee the STREET (and SQUARE) with active fronts.
This overview of the STREET contributes to vital and safe public space.
4. Property lines are physically defined by buildings or STREET WALLS.
Land should be clearly *public* or *private*—in public view and under surveillance or private and protected.
5. Buildings are designed for towns and cities.
Rather than being simply pushed closer together, as in many sub-urban developments, buildings must be designed for the urban situation within towns and cities. Views are directed to the STREET and the garden/court-yard, not toward the neighbors.
6. Vehicle storage, garbage and mechanical equipment are kept away from the STREET.
7. Retail on the GROUND FLOOR (for MAIN STREET locations).
Retail helps to make the STREET active and interesting.
8. Parking (not including on-street parking) should be away from the STREETS and shared by multiple owners/users.
9. Historic Character.
Those structures that have historic character should be preserved in some manner or their elements incorporated in the redevelopment of their site.

B. BUILDING ENVELOPE STANDARDS: MAIN STREET SITES



Height Specifications

Height Specifications

Building Height

1. Principal building height is measured in stories. These parameters preserve appropriate street-space and allow for greater variety in building height.
2. Each building shall be between 3 and 6 stories in height, except where otherwise noted here or in the REGULATING PLAN.

Parking Structure Height

No parking structure within the block shall exceed the base height of any building (built after 2002) within 40 feet of the parking structure.

Ground Story Height

1. The ground story floor elevation shall be between 6 inches below and 24 inches above the sidewalk elevation at the front of the building. The maximum floor-to-floor story height limit for the ground floor is 24 feet.
2. The ground floor shall have at least 15 feet clear (floor to ceiling) height for at least 1/3 of its area contiguous to RBL frontage.

Upper Stories Height

1. The maximum floor-to-floor story height limit for stories other than the Ground Story is 14 feet.
2. At least 80 percent of the upper stories shall each have at least 9 feet 4 inches clear (floor to ceiling) height.

Mezzanines and Podiums

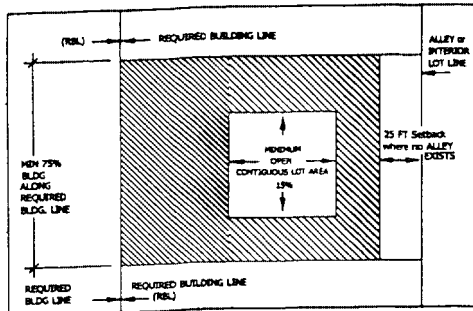
Mezzanines and podiums greater than 2/3 of the floor area footprint shall be counted as full stories.

Street Wall Height

1. Any unbuilt alley and/or common lot line frontage shall have a street wall built along it, 7 feet in height.
2. Street wall heights are measured relative to the adjacent sidewalk or to the ground elevation when not fronting a sidewalk.

Other

Where a MAIN-STREET site is within 40 feet of a LOCAL SITE, NEIGHBORHOOD SITE or a single-family home, the maximum height for that portion is 32 feet to the EAVES or PARAPET.



Siting Specifications

Siting Specifications

Street Facade

1. The Street facade shall be built to not less than 75 percent of the overall RBL. However, the ground floor portions of the Street facade within 7 feet of a Block Corner are exempt from this requirement in order to allow special corner treatments in these areas.

2. The Street facade shall be composed as a simple plane (limited jogs less than 24 inches are considered a simple plane within this requirement) interrupted only by porches, stoops, bay windows, shopfronts, and balconies.

Buildable Area

Buildings shall occupy only the area of the lot specified in the siting specifications of the BUILDING ENVELOPE STANDARDS as buildable area. No part of any building excepting overhanging eaves and BES permitted balconies, bay windows, stoops, and shopfronts shall encroach into the street beyond the RBL. No part of any building (excepting overhanging eaves, balconies, stoops, and small and unroofed garden structures) shall occupy the remaining lot area. The minimum open contiguous area shall comprise at least 15% of the total BUILDABLE AREA and can be located anywhere within the BUILDABLE AREA of the site.

Side Lot Line

There are no required side lot line setbacks unless shared with an existing single family house where an 8-foot setback is required.

Garage and Parking Entrances

1. Garage/parking entrances shall be no closer than 50 feet from any building corner or 100 feet from any block corner (except where otherwise designated on the REGULATING PLAN).
2. Designated GARAGE ENTRIES and alleys shall be the sole means of automobile access to a site.
3. Garage doors shall not face (be at an angle of less than 90 degrees from the RBL or right of way) the RBL. Vehicle parking areas (except where a street wall exists or parking is enclosed within an ancillary building) on private property shall not be located within 25 feet of the RBL. These requirements are not applicable to on-street parallel parking.

Alleys

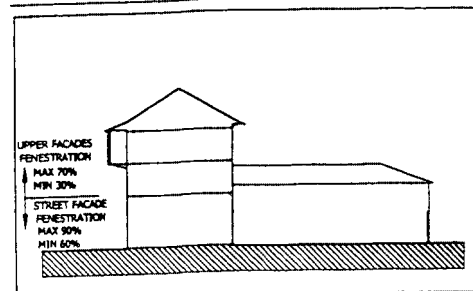
On sites with no alley access, there shall be a 25-foot setback from the rear lot line.

Corner Lots

Corner lots shall be treated as having STREET FRONTAGE on both the front and side streets (or RBLs).

Unbuilt RBL and Common Lot Line Treatment

Any unbuilt RBL shall have a street wall along it, between 6 feet and 10 feet in height. STREET WALLS may also be constructed along any unbuilt common lot line.



Elements Specifications

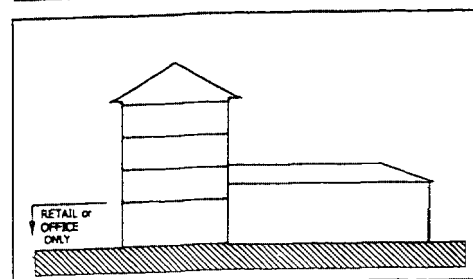
Elements Specifications

Ground Story Fenestration

The ground story facade shall have between 60 percent and 90 percent fenestration (measured as a percentage of the facade that is between 2 and 10 feet above the fronting sidewalk). Awnings and overhangs are encouraged (except where otherwise designated on the REGULATING PLAN).

Upper Stories Fenestration

Upper story facades shall have between 30 percent and 70 percent fenestration (measured for each story as a percentage of the facade that is between 3 and 9 feet above the finished floor).



Use Specifications

Use Specifications

Ground Story

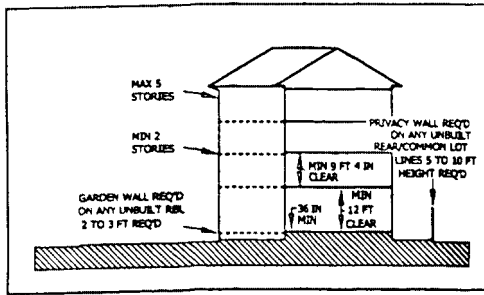
1. The ground story shall house retail uses as defined on page 17-18 as well as lobby and access for upper story uses.
2. There shall be functioning entry door(s) along the street facade at intervals not greater than 60 feet within any site.

Upper Stories

Retail uses are not permitted on the upper stories (except those of less than 900 square feet and/or second stories as an extension of the ground story

use and with direct Columbia Pike frontage). Second story restaurants do not violate this rule. Business and professional offices including medical, legal, insurance, philanthropic, real estate, banking, and other offices which in the judgement of the Zoning Administrator with a recommendation from the Administrative Review Team are of the same general character as those listed above may be located on all floors of MAIN STREET sites.

C. BUILDING ENVELOPE STANDARDS: AVENUE SITES



Height Specifications

Height Specifications

Building Height

1. Principal building height is measured in stories.
2. Buildings shall be between 2 and 5 stories in height, except where otherwise noted here or in the REGULATING PLAN.

Parking Structure Height

No parking structure within the block shall exceed the same height of any building (built after 2002) within 50 feet of the parking structure.

Ground Story Height

1. The ground story finished floor elevation of any residential unit shall be no less than 36 inches above the fronting sidewalk.
2. The maximum floor-to-floor story height limit for the ground floor story is 24 feet.
3. No less than 80 percent of the ground floor story shall have at least 12 feet in clear height.

Upper Story Height

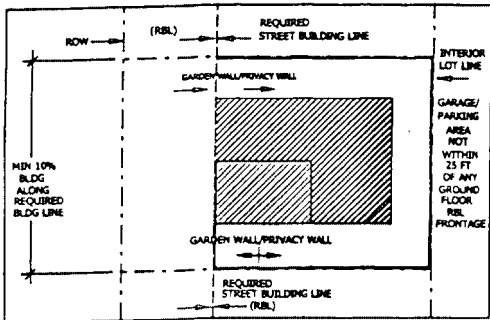
1. The maximum floor-to-floor story height limit for upper floors is 14 feet.
2. At least 80 percent of each upper story shall have at least 9 feet 4 inches clear (floor to ceiling) height.

Mezzanines and Podiums

Mezzanines and podiums greater than 1/3 of the floor area footprint shall be counted as a full story.

Other

Where any part of an Avenue site is within 40 feet of a Local Street (or lesser) site or an existing single family use dwelling, the maximum height for that portion is 32 feet to the eaves or parapet.



Siting Specifications

Siting Specifications

Street Facade

1. The street facade shall be built to the RBL not less than 10 percent of the overall RBL.
2. That portion of a facade that is required to be built to the RBL shall be composed as a simple plane (limited jogs less than 18 inches are considered a simple plane within this requirement) interrupted only by porches, stoops, bay windows, shopfronts, and balconies.

Buildable Area

Buildings shall occupy only the area of the lot specified in the siting specifications of the Building Envelope Standard as buildable area. The diagram above provides a sample building footprint. No part of any building excepting overhanging eaves and BES permitted balconies, bay windows, stoops, and shopfronts shall encroach into the street beyond the RBL. No part of any building (excepting overhanging eaves, balconies, stoops, and small and unroofed garden structures) shall occupy the remaining lot area. The minimum open contiguous area shall comprise at least 30% of the total buildable area and can be located anywhere within the buildable area of the site.

Side Lot Line

There are no required side setbacks unless shared with an existing single family house where an 8-foot setback is required.

Garage and Parking Entrances

1. Any garage and/or parking areas for vehicles (autos, trailers, boats, etc.)—except where parking is

located in an ancillary structure, enclosed in a rear-loading town-house garage, or in a below grade garage on private property shall not be located within 25 feet from any RBL and shall be screened from the street by a street wall.

2. Parking access shall be from an alley where present. Designated garage entries and alleys shall be the sole means of automobile access to a site unless otherwise approved by the Zoning Administrator with a recommendation from the Administrative Review Team.
3. Garage doors shall not face (be at an angle of less than 90 degrees from the RBL or right of way) the RBL.
4. These requirements are not applicable to on-street parallel parking.

Alleys

On sites with no alley access, there shall be a 25-foot setback from the rear lot line.

Corner Lots

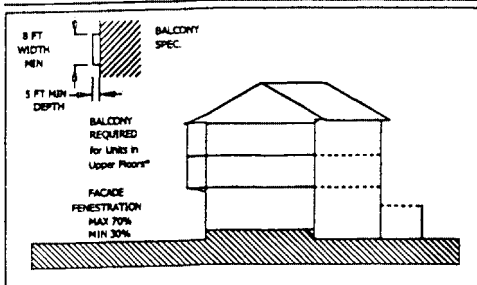
Corner lots shall be treated as having street frontage on both the front and side streets (or RBLs).

Unbuilt RBL, Rear, and/or Common Lot Line Treatment

Any unbuilt RBL shall have a garden wall along it, between 2 feet and 3 feet in height. Any unbuilt rear or common lot line that is located more than 15 feet behind the RBL may have a privacy fence along it that is 7 feet in height.

Other

The Building Envelope Standards for Local Sites may be utilized on Avenue Sites.



Elements Specifications

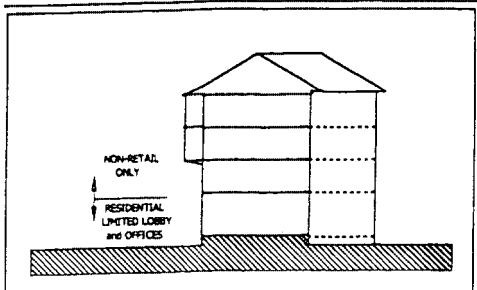
Elements Specifications

Fenestration

Fenestration shall be between 30 percent and 70 percent of all RBL building facades (when measured as a percentage of the area of each facade and story between 3 and 9 feet above the finished floor). Blank lengths of wall along any RBL facade of more than 20 linear feet are prohibited.

Balconies

When provided, balconies are required to be a minimum of 5 feet deep and 8 feet wide (except where the RBL is within 8 feet of a right of way).



Use Specifications

Use Specifications

Ground Story

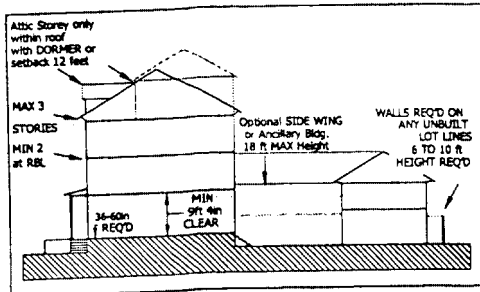
A ground floor may include residential uses and have small professional office, building lobby, or building manager/maintenance offices (each less than 1,000 square feet). (Retail uses are permitted on a ground floor where the underlying zoning is zoned commercial "C" or where properties are zoned "CP-FBC".)

Upper Stories

Retail uses are not permitted on upper stories. However business and professional offices including

medical, legal, insurance, philanthropic, real estate, banking and other offices which in the judgement of the Zoning Administrator with a recommendation from the Administrative Review Team are of the same general character as those listed above may be located on the second floor.

D. BUILDING ENVELOPE STANDARDS: LOCAL SITES



Height Specifications

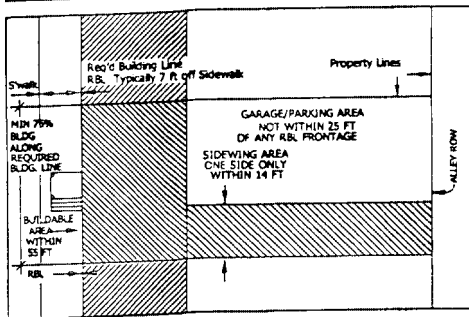
Height Specifications

Building Height

1. Principal building height is measured in stories.
2. Each building shall be between 2 and 3 stories in height. Additionally, an attic story may be built. An attic or half story is any top story which achieves its minimum clear height between 8 and 12 feet behind the RBL. An attic or half-story may have dormer windows which face the street.

Ground Story Height

1. The first story finished elevation of any residential unit shall be between 36 and 60 inches above the fronting sidewalk. Where live-work is indicated as permissible on the REGULATING PLAN, the ground floor elevation of all live-work development shall be between 0 inches and 18 inches above the fronting sidewalk and have at least 12 feet in clear height for at least 1/3 of its area contiguous to RBL frontage.
2. The maximum floor to floor story height limit for the ground floor is 14 feet.
3. All STORIES shall have at least 9 feet 4 inches in clear height for at least 80 percent of their area.



Siting Specifications

Siting Specifications

Street Façade

1. The Street façade shall be built to not less than 75 percent of the overall RBL. However, at the ground floor, portions of the STREET façade within 7 feet of a Block Corner are exempt from this requirement in order to allow special corner treatments in these areas.
2. That portion of a façade that is required to be built to the RBL shall be composed as a simple plane (limited jogs less than 24 inches

are considered a simple plane within this requirement) interrupted only by porches, stoops, bay windows, shopfronts, and balconies.

Buildable Area

Buildings shall occupy only the area of the lot specified on the REGULATING PLAN as buildable area. No part of any building excepting overhanging eaves, and BES permitted balconies, bay windows, stoops, and shopfronts shall encroach into the STREET beyond the RBL. No part of any building (excepting overhanging eaves, balconies, stoops, and small and unroofed garden structures) shall occupy the remaining lot area. The minimum open contiguous area shall comprise at least 15% of the total BUILDABLE AREA and can be located anywhere within the BUILDABLE AREA of the site.

Side Lot Line

There are no required side setbacks unless shared with an existing single family house where an 8 foot setback is required.

Garage and Parking Entrances

1. Any garage and/or vehicle (autos, trailers, boats, etc.) parking areas — except where parking is located in an ancillary structure, enclosed in a rear-loading town-house garage, or in a below grade garage — on private property shall not be located within 25 feet of the RBL (except for basement garages) and screened from the STREET by a STREET WALL.

Upper Stories Height

1. All STORIES shall have at least 9 feet 4 inches in clear height for at least 80 percent of their area.
2. The maximum floor to floor story height limit for upper stories is 12 feet.

Mezzanines and Podiums

Mezzanines or podiums greater than 2/3" of the floor area footprint shall be counted as a full story.

Street Wall and Fence Height

1. Any unbuilt RBL shall have a STREET WALL built along it and any unbuilt COMMON LOT LINE shall have a PRIVACY FENCE along it, 7 feet in height.
2. STREET WALL heights are measured relative to the adjacent sidewalk or ground elevation when not fronting a sidewalk.

Other

Where a part of a Local Site is within 40 feet of a Neighborhood Site existing single family use dwelling, the maximum height for any structure on that portion of the site is 32 feet to the eaves or parapet.

2. Parking access shall be from an ALLEY where present. Designated GARAGE ENTRIES and ALLEYS shall be the sole means of automobile access to a site, unless otherwise approved by the ADMINISTRATIVE REVIEW TEAM.

3. Garage doors shall not face (be at an angle of less than 90 degrees from the RBL or right of way) the RBL.

4. These requirements are not applicable to on-street parallel parking.

Alleys

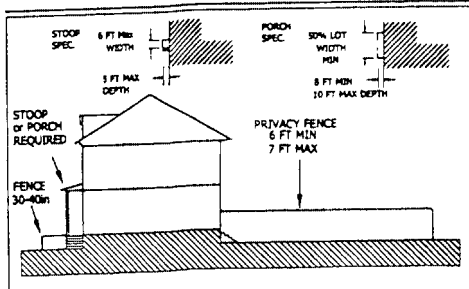
On sites with no ALLEY access, there shall be a 12 foot setback from the rear lot line.

Corner Lots

Corner lots shall be treated as having STREET FRONTAGE on both the front and side-streets (or RBLs).

Lot/Unit Width

The lot/unit width shall be between 16 feet and 32 feet. No more than 1/3 of the units in any phase shall be less than 18 feet wide. A maximum of 7 units or 150 feet (whichever is greater) shall be contiguous as a single building. There shall be a 10 feet gap (gated) between multiple buildings.



Elements Specifications

Elements Specifications

Stoops

Each LOT/UNIT shall include a stoop of not more than 5 feet deep and 6 feet wide (plus steps) which is required to be built forward of the (RBL) or a front porch, between 8 feet and 10 feet deep with a width not less than 50 percent of the RBL shall be added - with the building façade placed an additional 2 feet back from the STREET/RBL.

Fences/Garden Walls

A fence or GARDEN WALL, 30 to 40 inches in height, is permitted along the STREET FRONTAGE and along the

COMMON LOT LINES of the front yard. Opaque ornamental fencing (not including chain link or any other roll type fencing), between 6 and 7 feet in height, may be placed along any unbuilt rear and common lot lines.

Fenestration

Fenestration shall be between 30 percent and 70 percent of all RBL building façades (when measured as a percentage of the area of each façade and story between 3 and 8 feet above the finished floor). Blank lengths of wall along any RBL façade of more than 15 linear feet are prohibited.

Use Specifications

Ground Floor

A GROUND FLOOR may have residential and home office uses. Where a site is designated Live-Work, the GROUND FLOOR may additionally have small professional office, building lobby, building manager's office, ancillary retail grocery, and café uses (each less than 1,200 sf).

Upper Stories

Upper stories shall be exclusively for residential and home occupations, as defined by the County. Where a site is designated Live-Work on the REGULATING PLAN, the second story may also include small professional office uses.

Accessory Units

1. One English basement unit or one ACCESSORY UNIT is permitted. Conversion of primary structure

single-family units for multiple family uses is prohibited.

2. Parking and accessory unit (maximum 650 sf) uses are permitted in the building area at the rear of the LOT.

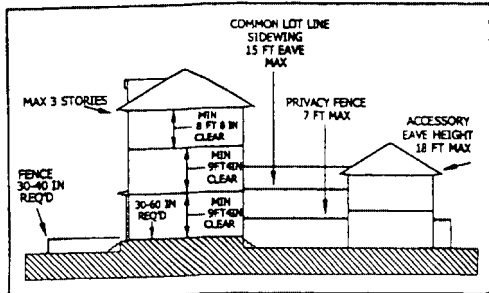
Garage/Parking

The garage/parking for vehicles (autos, trailers, boats, etc.) shall be located at least 25 feet away from any RBL (excepting basement garages).

The following requirements apply only to Live-Work Designated Sites

1. There is no front porch requirement.
2. There is no front yard fence requirement.
3. The ground story finished floor elevation shall be between 0 and 18 inches above the adjacent sidewalk elevation and the ground story shall have a clear height of between 12 and 19 feet.

E. BUILDING ENVELOPE STANDARDS: NEIGHBORHOOD SITES



Height Specifications

Height Specifications

Building Height

1. Principal building height is measured in stories.
2. The building shall be no more than 3 stories in height.
3. No accessory building shall be more than 18 feet to its eaves.

Ground Floor and Second Story Height

1. The ground floor finished elevation shall be between 30 and 60 inches above the average RBL elevation.
2. The maximum floor-to-floor story height for the ground floor story is 14 feet

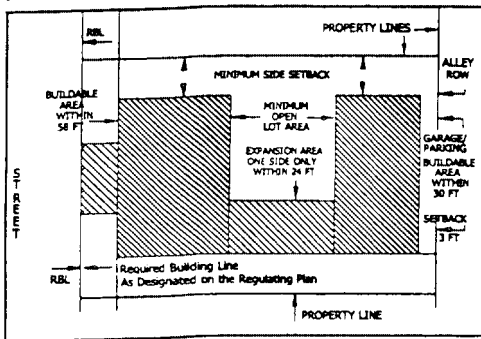
3. The ground floor story and second stories shall have at least 9 feet 4 inches in clear height for at least 80 percent of the area of the particular story.

Upper Stories Height

1. The maximum floor-to-floor story height for upper stories is 10 feet.
2. Each story above the second story shall have at least 8 feet 8 inches in clear height for at least 80 percent of its area.

Mezzanines and Podiums

Mezzanines or podiums greater than 2/3 of the floor area footprint shall be counted as full stories.



Siting Specifications

Siting Specifications

Street Facade

1. The street facade shall be built to the RBL not less than 33 percent of the overall RBL.
2. That portion of a facade that is required to be built to the RBL shall be composed as a simple plane (limited jogs less than 18 inches are considered a simple plane within this requirement) interrupted only by porches, stoops, bay windows, shopfronts, and balconies.

Buildable Area

Buildings shall occupy only the area of the lot specified on the REGULATING PLAN as buildable area. No part of any building excepting overhanging eaves and BES permitted balconies, bay windows, and stoops shall encroach into the street beyond the RBL. No part of any building (excepting overhanging eaves, balconies, stoops, and small and unroofed garden structures) shall occupy the remaining lot area. The minimum open contiguous area shall comprise at least 30% of the total BUILDABLE AREA and can be located anywhere within the BUILDABLE AREA of the site.

Side Lot Line

The minimum side setback is 5 feet.

Garage and Parking Entrances

1. Designated GARAGE ENTRIES shall be the sole means of automobile access to a site, unless otherwise approved by the County.
2. Garage doors shall not face (be at an angle of less than 90 degrees from the RBL or street) RBL. Vehicle parking areas (except where a street wall exists or parking is enclosed within an ancillary building) on private property shall not be located within 25 feet of the RBL. These prohibitions are not applicable to on-street parallel parking.

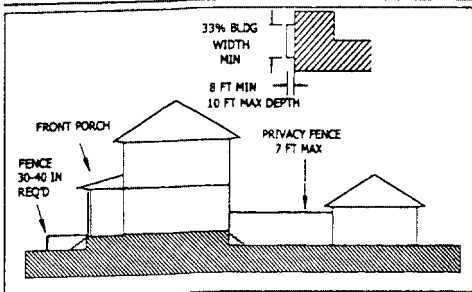
3. Any garage or parking for vehicles (autos, trailers, boats, etc.) shall be kept within the area designated on the SITING SPECIFICATIONS diagram for NEIGHBORHOOD SITES. Garage or parking areas shall be set at least 25 feet behind the RBL.

Alleys

Where there is no alley at the rear lot line, there shall be a 12-foot setback.

Corner Lots

Corner lots shall be treated as having STREET FRONTAGE on both the front and side streets (or RBLs).



Elements Specifications

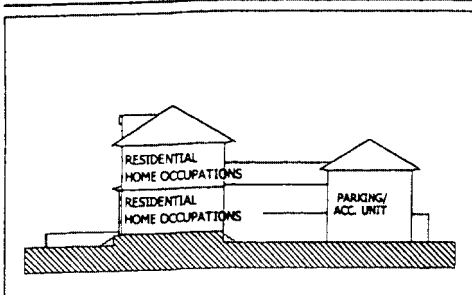
Elements Specifications

Fences

1. An ornamental front yard fence (not to be chain link or any other type of rolled fencing), 30 to 40 inches in height, is required along the street frontage and common lot lines to at least 10 feet beyond the Required Building Line (RBL).
2. A PRIVACY FENCE 7 feet in height, may run the remainder of the rear and common lot lines (except within the front yard area which shall have a fence as designated above).

Front Porch

A front porch, between 8 feet and 10 feet deep with a width equal to no less than 33 percent of the total building width, is required along and in front of the RBL. For designated lots (see the REGULATING PLAN) the front porch is optional.



Use Specifications

Use Specifications

1. Within the primary building permitted uses include: Home occupations as defined in the Zoning Ordinance (by-right with these exceptions: maximum 2 nonresident employees within the primary structure and/or maximum 1 nonresident employee within 1 accessory structure, for each lot.).
2. One English basement unit or one accessory unit is permitted. Conversion of primary structure single-family units for multiple family uses is prohibited.
3. Parking and accessory unit (maximum 650 square feet) uses are permitted in the building area at the rear of the lot.

V. Streetscape Standards

The **Columbia Pike Special Revitalization District** sites are coded to be "perimeter BLOCKS" with buildings placed at the STREET along the outer edge of their sites. The **Streetscape Standards** ensure the coherence of those STREETS. They also serve to a building owners and operators with understanding the relationship between the STREET their own LOTS. These standards also establish an environment that encourages and fa pedestrian activity. Native trees and plants contribute to privacy, noise reduction, maintenance of the natural habitat, and conservation of water. Furthermore, they req maintenance than imported or exotic species.

A. General Principles and Intent

THE STREETScape

- The STREET and building façade receives more attention than the rest of the bu
- STREETScape elements, such as brick pavers, benches and waste-bins, througho **Columbia Pike Special Revitalization District** must be consistent within a and should be consistent from project to project within an activity node (i.e. To Center).
- STREET TREES are part of an overall streetscape plan designed to give special ch to each STREET and coherence to each area. The desired aesthetic shall be ach through the use of native/proven hardy adapted species where reasonable.
- PUBLIC ART shall be provided in accordance with the Arlington County PUBLIC AR and the *Public Art Master Plan* (when adopted).

FRONTS AND REARS

- Building facades are the public "face" of every building. Owners are encourag place planters and window boxes with flowering plants and/or climbing vines a area in front of their buildings within the "shy zone", which is the area on the within 2 feet of the building face.
- The private, rear portions of the LOTS (toward the alley) allow commercial ope utilize these spaces as efficient working environments unseen by the public ar residents to have private and semi-private (for apartment and condominium b open space.

B. Minimum Standards

THE STREETScape

- Each STREET shall have canopy shade trees (STREET TREES). Wherever the REGULATING PLAN does not show specific STREET TREE placement, STREET TREES shall be planted along the STREET TREE ALIGNMENT LINE at an average spacing not greater than 25 to 30 feet on center (measured per block face). Tree planting area widths are specified in the **Typical Street Cross Sections** [for side streets] or the Master Transportation Plan – Part 1 [for Columbia Pike itself]. However, open soil surface area shall be not less than 60 square feet (with a minimum of 5 feet in any direction) per isolated tree, and connected (tree strip) planting areas are encouraged. The planting area's minimum dimension shall be not less than 5 feet. At planting, trees shall be at least 4 to 4.5 inches in diameter (4 feet above grade) and at least 12 feet in overall height. Species shall be selected from the **Columbia Pike Special Revitalization District Street Tree List**. Consult the ADMINISTRATIVE REVIEW TEAM for the designated tree species for a particular STREET.
- Any unpaved ground area fronting the LOTS (to the curb) shall be planted with groundcover or flowering vegetation.
- STREET TREES shall be "limbed up" so as to not interfere with pedestrian or auto/truck travel (minimum 7 feet clear over the sidewalk and 14 feet over the travel lanes of the street).

BACKS

- At least 1 canopy shade tree per 200 square feet of the required open (unpaved) area shall be planted in the rear LOT area and no closer than 5 feet to any COMMON LOT LINE. (See the siting requirement under the BUILDING ENVELOPE STANDARDS). Such trees shall be at least 4 to 4.5 inches caliper (4 feet above grade) and 10 feet in overall height. Species shall be selected from the **Columbia Pike Special Revitalization District Street Tree List**.

SIDEWALKS

- Sidewalks not otherwise designated in the **Street Type Specifications** or in the Master Transportation Plan – Part 1, are a minimum of 5 feet wide and shall be constructed to meet all County specifications.
- Where an area is unpaved, owners may place pavers and/or stepping stone walks between the curb and the sidewalk and between the sidewalk and entry/steps. Within the STREET the width of such walkways shall not exceed 6 feet and walkways shall not be located less than 8 feet from any STREET TREE.
- Sidewalks along Columbia Pike are to have 3 distinct zones; the shy zone (at least 2 feet in width), the clear zone (no less than 6 feet in width), and the furniture zone (up to 6 feet in width).

- The clear zone shall be constructed entirely of plain poured concrete. A variety of paving materials, textures and colors are encouraged in the shy and furniture zones. Consistency of paving design is required within a project and within each activity node.

TURF AND GROUNDCOVER (WHERE VISIBLE FROM THE STREET and along the ALLEY)

- All turf grass must be solidly sodded at installation—not seeded, sprigged, or plugged (consult the ADMINISTRATIVE REVIEW TEAM).
- Groundcovers may be used in place of turf grass.
- In addition to the Lot, the owner must maintain the following areas:
 - ✓ The portion of the STREET between their LOT line(s) and the back of the curb.
 - ✓ The portion of the ALLEY between the LOT line(s) and the edge of pavement.

ON-STREET PARKING

- On-street parking nubs shall be incorporated into the sidewalk in a pattern consistent with the Master Transportation Plan.
 - ✓ The parking space / tree planting pattern may be interrupted by existing or proposed new driveways, streets, alleys, and transit stops/stations.
 - ✓ Parking spaces shall be constructed in a manner that allows proper drainage (toward a valley gutter at the curb line)
 - ✓ Parking spaces shall be constructed according to County standards to ensure accessibility for street cleaning vehicles.

GENERAL NOTES

- All plant material (including trees) shall conform to the standards of the *American Association of Nurserymen* and shall have passed any inspections required under State regulations.
- Invasive exotic species found anywhere on the LOT shall be removed.
- Mechanical and electrical equipment including, but not limited to, air compressors, pumps, exterior water heaters, water softeners, private garbage cans (not including public sidewalk waste bins), and storage tanks may not be stored or located within any STREET. (Water pumps not visible are not included in this prohibition.)
- Street lighting shall be placed along the STREET TREE ALIGNMENT LINE or within the furniture zone as shown in the Master Transportation Plan.

C. SQUARES AND CIVIC GREENS

In addition to the above landscape requirements, SQUARES and CIVIC GREENS located within the **Columbia Pike Special Revitalization District** shall be designed, planted and maintained according to the following requirements.

SQUARES are generally active pedestrian centers. They should be designed appropriate to their high (pedestrian) traffic level with a higher percentage of paved surface area, underneath the canopy of shade trees. CIVIC GREENS are spaces intended for less intensive foot traffic. Pervious paving materials are encouraged in both SQUARES and CIVIC GREENS, and the percentage of impervious paving material shall be limited. The green plants and trees of SQUARES and CIVIC GREENS provide a landscape and civic architecture that complements the surrounding building architecture. A clear view through the public space is important for safety and urban design purposes.

SQUARES

- Surface treatment and materials (within the area back-of-curb to back-of-curb excluding any CIVIC BUILDING, PUBLIC ART or monument footprint).
 1. Minimum 30 percent pervious surface area (turf, groundcover, soil or mulch).
 2. The remaining balance may be any paved surface including a maximum 30 percent *impervious* paved surface.
 3. A PUBLIC ART project (as defined herein or in Arlington County PUBLIC ART policy) is required in these locations.
 4. Paved surfaces, including the cartway, shall have a coordinated, distinctive pattern that calls attention to the pedestrian nature of the area.

CIVIC GREENS

- Surface treatment and materials (within the area back-of-curb to back-of-curb excluding any CIVIC BUILDING, PUBLIC ART or monument footprint).
 1. Minimum 60 percent pervious surface area (turf, groundcover, soil or mulch).
 2. The remaining balance may be any paved surface including a maximum 30 percent *impervious* paved surface.
 3. A PUBLIC ART project (as defined herein or in Arlington County PUBLIC ART policy) is required in these locations.
 4. Paved surfaces, including the cartway, shall have a coordinated, distinctive pattern that calls attention to the pedestrian nature of the area.

MATERIALS AND CONFIGURATIONS

- Wherever the REGULATING PLAN or the Master Transportation Plan does not show specific STREET TREE placement, STREET TREES shall be planted along the STREET TREE ALIGNMENT LINE at an average spacing not greater than 25 to 30 feet on center.
- The ground surface level elevation shall be between 0 and 18 inches above the top of the adjacent curb.

- Except for tree trunks, STREET LIGHTS, CIVIC BUILDINGS, PUBLIC ART or monuments, there shall be a clear view between 2 and 10 feet above grade. The foliage of newly planted trees may intrude into this area until the tree has sufficient growth to allow such a clear trunk height.
- Trees shall be selected from the **Columbia Pike Special Revitalization District Street Tree List**.
- Asphalt is prohibited on sidewalks, but may be incorporated in cartway design.
- Curb return radii on all intersections shall be 15 feet, where possible.

D. Columbia Pike Special Revitalization District Street Tree List

The following list contains all species approved for use in the **Columbia Pike Special Revitalization District**. It contains native and acceptable adapted species. Other species may be used for planting within a LOT. Invasive exotic species may not be used anywhere on LOTS or other areas within the **Columbia Pike Special Revitalization District**. Species in **bold type** are specified (first preference) for placement along the STREET TREE ALIGNMENT LINE, as specified in the REGULATING PLAN. At the recommendation of the ADMINISTRATIVE REVIEW TEAM in coordination with the County's urban forester, modifications to this list may be made at a future date.

Columbia Pike Special Revitalization District STREET TREE LIST

- | | |
|---|---|
| ▪ Acer nigrum | Black Maple |
| ▪ Acer rubrum | Red Maple (Town Center) |
| ▪ Carya ovata | Shagbark Hickory |
| ▪ Celtis laevigata | Sugar Hackberry |
| ▪ Fraxinus americana | White Ash |
| ▪ Fraxinus pennsylvanica laceolata | Green Ash (Village Center) |
| ▪ Ginko Biloba | Ginko (male only) |
| ▪ Gleditsis triacanthos inermis | Thornless Honey Locust |
| ▪ Liquidambar styracifolia | Sweetgum |
| ▪ Nyssa sylvatica | Tupelo Black Gum |
| ▪ Ostrya virginiana | Hophornbeam |
| ▪ Platanus x acerifolia | London Planetree (Neighborhood Center) |
| ▪ Platanus occidentalis | Sycamore |
| ▪ Quercus phellos | Willow Oak (Western Gateway) |
| ▪ Quercus rubra | Red Oak |
| ▪ Quercus velutina | Black Oak |
| ▪ Tilia tomentosa | Silver Linden |
| ▪ Ulmus americana | American Elm (Valley Forge) |
| ▪ Tilia Americana | Basswood |
| ▪ Zelkova serrata | Japanese Zelkova |

VI. Architectural Standards

Buildings must be reviewed by the ADMINISTRATIVE REVIEW TEAM. The ADMINISTRATIVE REVIEW TEAM will also work with the developer and/or designer to show them how the **Form Based Code** will satisfy their site needs and other requirements.

A. General Principles and Intent

TRADITION

- These standards favor an aesthetic that is traditional in a broad sense. They specify an architecture language of load-bearing walls and regional materials. The standards also specify certain details, such as column and pier spacing, window proportions, roof or cornice configurations, storefronts, and overhangs.
- The intent behind these standards is to utilize a discipline of form when designing new buildings in order to foster a coherent Columbia Pike aesthetic.
- All building materials to be used shall express their specific properties. For example, stronger and heavier materials (masonry) support lighter materials (wood).

EQUIVALENT OR BETTER

- While only materials, techniques, and product types prescribed here are allowed, equivalent or better practices and products are encouraged. They shall be submitted to the ADMINISTRATIVE REVIEW TEAM and may be added to the approved list after proper review by the County.

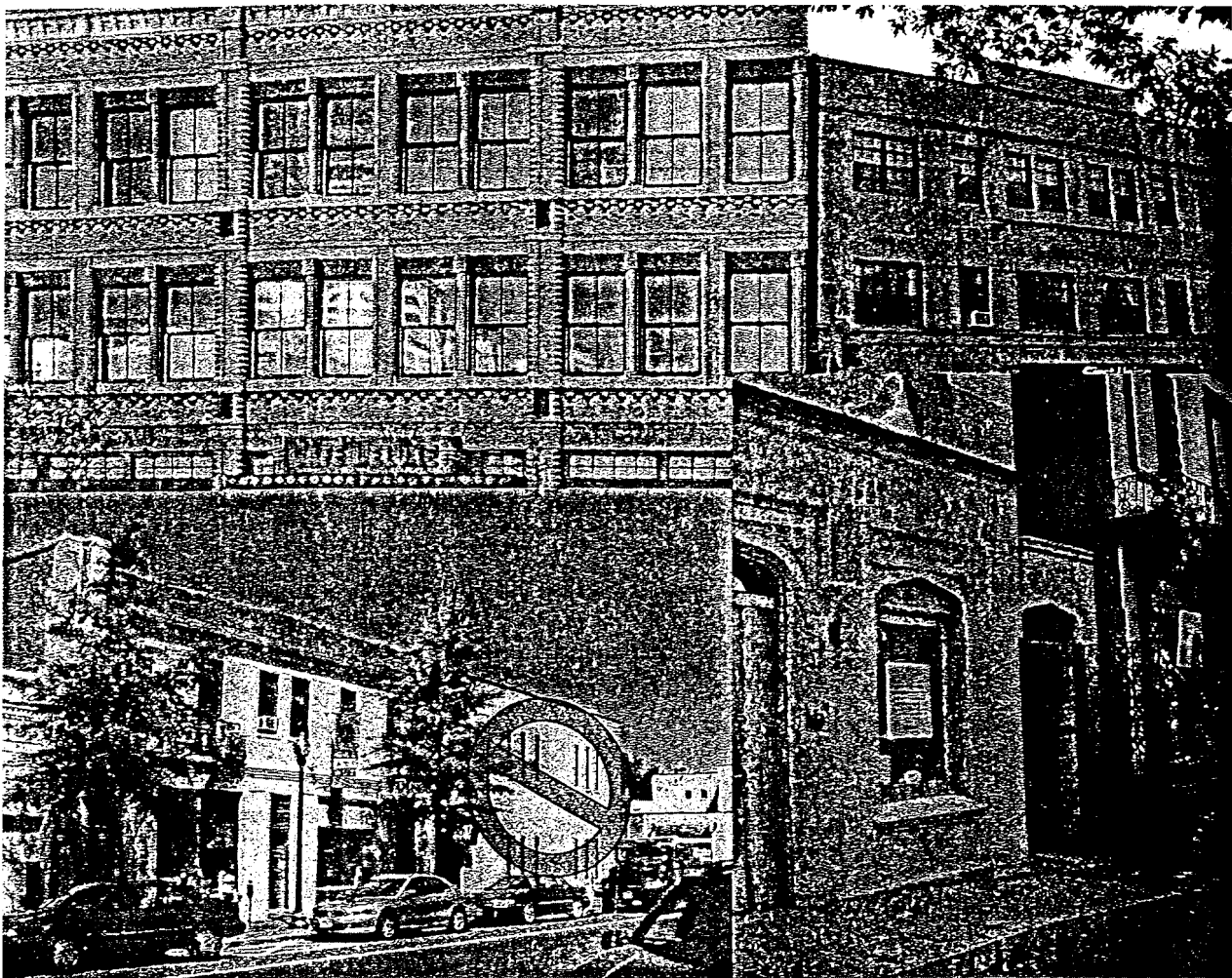
WHERE CLEARLY VISIBLE FROM THE STREET

- Many of these standards apply only in conditions WHERE CLEARLY VISIBLE FROM THE STREET. Note that the definition of STREET includes parks, CIVIC SQUARES, and CIVIC GREENS. These controls therefore concentrate on the public space/views from the public space and minimize interference in the private realm. For example, an architectural element that is visible only through an opening in a STREET WALL is not CLEARLY VISIBLE FROM THE STREET.

B. Building Walls (Exterior)

INTENT AND GUIDING ILLUSTRATIONS FOR BUILDING WALLS

Building walls should reflect and complement the traditional materials and techniques of Arlington County's regional architecture. They should express the construction techniques and structural constraints of traditional, long-lasting, building materials. Simple configurations and solid craftsmanship are favored over complexity and ostentation in building form and the articulation of details. All building materials to be used shall express their specific properties. For example, heavier more permanent materials (masonry) support lighter materials (wood). The illustrations and statements on this page are advisory only. Refer to the Code standards below for the specific prescriptions of this section.



STANDARDS FOR BUILDING WALLS (WHERE CLEARLY VISIBLE FROM THE STREET)

Materials: The following materials are permitted.

- Brick and tile masonry
- Stucco (cementitious finish)
- Native stone (or synthetic equivalent)
- Pre-cast masonry (for trim and cornice elements only)
- Gypsum Reinforced Fiber Concrete (GFRC—for trim elements only)
- Metal (for beams, lintels, trim elements and ornamentation only)
- Split-faced block (only for piers, foundation walls and chimneys)
- Wood lap siding
- Hardie-Plank™ equivalent or better siding

Configurations and Techniques: The following configurations and techniques are permitted.

Walls

- Wall openings shall not span vertically more than one story.
- Wall openings shall correspond to interior space and shall not span across building structure such as the floor structural and mechanical thickness.
- Wall materials shall be consistent horizontally (i.e. joints between different materials must be horizontal and continue around corners) except for chimneys and piers.
- Material changes shall be made within a constructional logic—as where an addition (of a different material) is built onto the original building.

Wood Siding and Wood Simulation Materials

- Lap siding (horizontal) configuration
- Smooth or rough-sawn finish (no faux wood grain)

Brick, Block and Stone

- Must be properly detailed and in appropriate load-bearing configurations.

Stucco (cementitious finish)

- Smooth or sand only, no “cake icing” finish.

C. ROOFS AND PARAPETS

INTENT AND GUIDING ILLUSTRATIONS FOR ROOFS AND PARAPETS

Roofs and PARAPETS should demonstrate a common sense recognition of the climate by utilizing appropriate pitch, drainage, and materials in order to provide visual coherence to the **Columbia Pike Special Revitalization District**. The illustrations and statements on this page are advisory only. Refer to the Code standards below for the specific prescriptions of this section.



STANDARDS FOR ROOFS AND PARAPETS (WHERE CLEARLY VISIBLE FROM THE STREET)

Materials: The following materials are permitted.

- Clay or concrete (faux clay)
- Tile (barrel or flat roman)
- Slate (equivalent synthetic or better)
- Metal (standing seam 5-v crimp, equivalent or better)
- Dimensional Asphalt shingles
- Cornices and soffits may be a combination of wood, vinyl, and/or metal

Configurations and Techniques: The following configurations and techniques are permitted.

Pitched Roofs

The primary ridge beam shall run parallel to the STREET (except NEIGHBORHOOD Sites).

Pitch (exclusive of roofs behind PARAPET walls)

- Simple hip and gable roofs shall be symmetrically pitched between 6:12 and 12:12.
- Shed roofs, attached to the main structure, shall be pitched between 4:12 and 7:12.

Overhang

- Eaves must overhang at least 24 inches on the primary structure.
- Rakes (gable end) must overhang at least 18 inches.
- Eaves and rakes on accessory buildings, dormers, and other smaller structures must overhang at least 8 inches.
- Open eaves and simple traditional soffits and fascia are allowed.
- Soffits shall be placed perpendicular to the building wall, not sloping in plane with the roof (except for gable end rakes).
- Timber eaves and balcony brackets must be a minimum of 5.5 inches in dimension.

Parapet Roofs (Cornice, Entablature, and Coping Standards)

Allowed for MAIN STREET and AVENUE Sites, and LIVE/WORK Sites where the roof material is not visible from any adjacent STREET only.

Cornices and Other Features

- Buildings without visible roof surfaces and overhanging EAVES may satisfy the overhang requirement with a cornice projecting horizontally between 6 and 12 inches beyond the building walls.
- Skylights and roof vents are permitted only on the roof plane opposite the primary STREET or RBL or when shielded from STREET view by the building's PARAPET wall.
- Overly elaborate, "postmodern" and/or "high-tech" designs are discouraged. However, ornamentation which contributes to the character of the building is encouraged. Consult the Administrative Review Team for appropriate configurations.

D. STREET WALLS

INTENT AND GUIDING ILLUSTRATIONS FOR STREET WALLS

STREET WALLS establish a clear edge to the STREET where the buildings do not. The ***Columbia Pike Special Revitalization District Form Based Code*** requirements include masonry walls that define outdoor spaces and separate the STREET from the private realm (parking lots, trash cans, gardens, and equipment). All STREET WALL facades shall be as carefully designed as the building façade, with the finished side out, i.e. the "better" side facing the STREET. The illustrations and statements on this page are advisory only. Refer to the Code standards below for the specific prescriptions of this section.



STANDARDS FOR STREET WALLS (WHERE CLEARLY VISIBLE FROM THE STREET)

Materials: The following materials are permitted.

- Native/regional stone and equivalent imitation stone
- Metal (wrought iron, welded steel and/or aluminum [black] for gates only)
- Brick
- Stucco on concrete block (or poured) only with brick or stone coping
- A combination of materials (e.g. stone piers with brick infill panels)

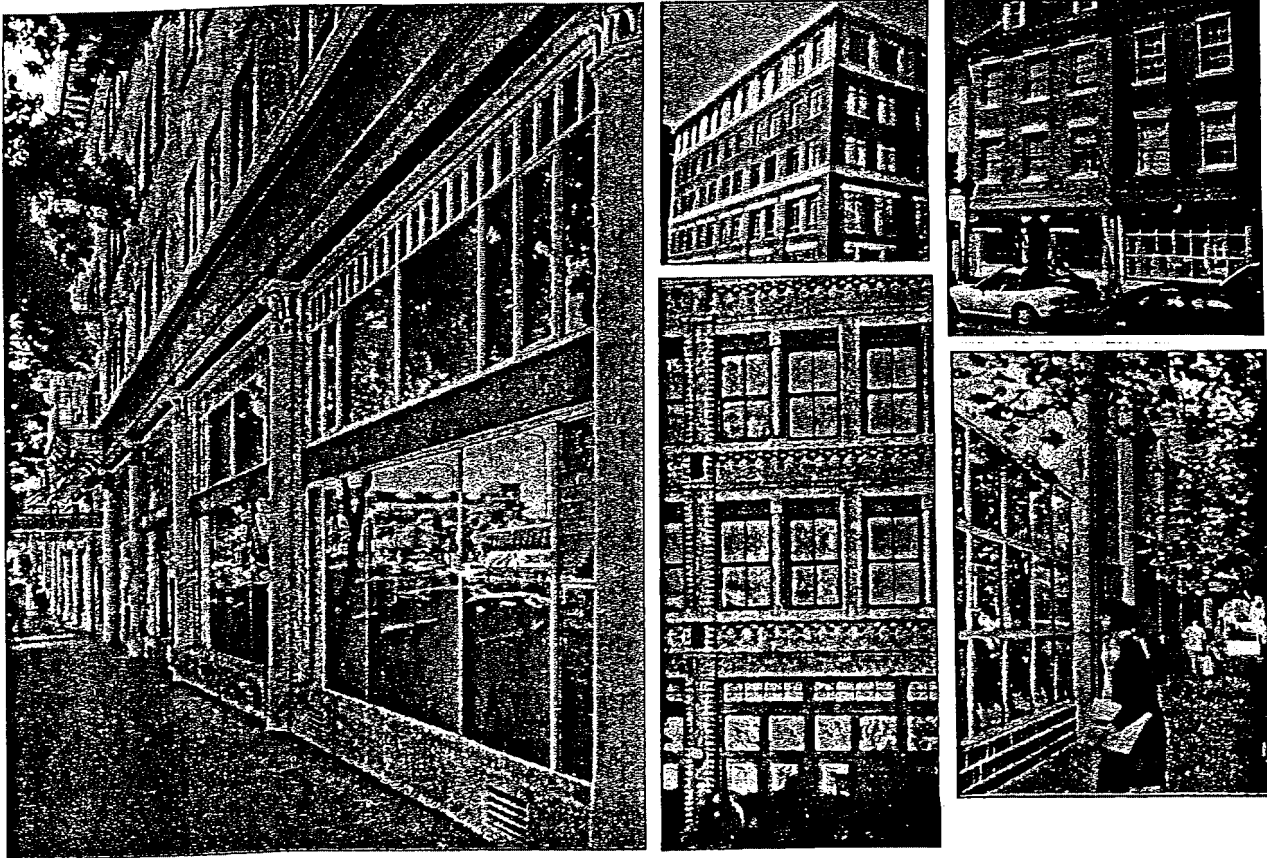
Configurations and Techniques: The following configurations and techniques are permitted.

- STREET WALLS along any unbuilt REQUIRED BUILDING LINE shall be built to a height of 7 feet above the adjacent ground.
- Stucco STREET WALLS shall have a hardy species of climbing vine planted along them.
- Metal work may additionally be treated to imitate a copper patina.
- Copings shall project between 1 inches and 4 inches from the face of the wall.

E. Windows and Doors

INTENT AND GUIDING ILLUSTRATIONS FOR WINDOWS AND DOORS

Windows shall be divided by multiple panes of glass. This helps the window “hold” the surface of the façade, rather than appearing like a “hole” in the wall (an effect produced by a large single sheet of glass). The illustrations and statements on this page are advisory only. Refer to the Code standards below for the specific prescriptions of this section.



STANDARDS FOR WINDOWS AND DOORS (WHERE CLEARLY VISIBLE FROM THE STREET)

Materials: The following materials are permitted.

- Windows shall be of anodized aluminum, wood, clad wood, vinyl, or steel.
- Window glass shall be clear, with light transmission at the ground story at least 90 percent and for the upper stories 75 percent (modification as necessary to meet any applicable building code requirements). Specialty windows may utilize stained, opalescent, or glass block (one per façade maximum).
- Window screens shall be black or gray.
- Screen frames shall match window frame material or be dark anodized.
- Doors shall be of wood, clad wood, or steel.

Configurations and Techniques: The following configurations and techniques are permitted.

- The following requirements apply to **all windows**:
 - Windows may be ganged horizontally (maximum 5 per group) if each grouping is separated by a mullion, column, pier or wall section that is at least 7 inches wide.
 - Windows shall be no closer than 30 inches to building corners (excluding BAY WINDOWS and where the BUILDING CORNER is also a BLOCK CORNER).
 - Exterior shutters, if applied, shall be sized and mounted appropriately for the window (one-half the width), even if inoperable.
- The following requirements apply to **all upper-STORY windows**:
 - Windows shall be double-hung, single-hung, awning, or casement windows.
 - Fixed windows are permitted only as a component of a system including operable windows within a single wall opening.
 - Residential buildings/floors: panes of glass no larger than 36 inches vertical by 30 inches horizontal.
 - The maximum pane size for office uses is 48 inches vertical by 40 inches horizontal.
 - Egress windows may be installed according to the appropriate building code.

▪ **Shopfront (ground floor) windows and doors:**

- Single panes of glass not larger than 6 feet in height by 4 feet wide.
- Ground floor windows shall not be made opaque by window treatments (excepting operable sunscreen devices within the conditioned space) and shall allow a minimum 60 percent of surface view into the building for a depth of at least 20 feet.
- Shopfronts may extend up to 24 inches beyond the façade (RBL) into the STREET.

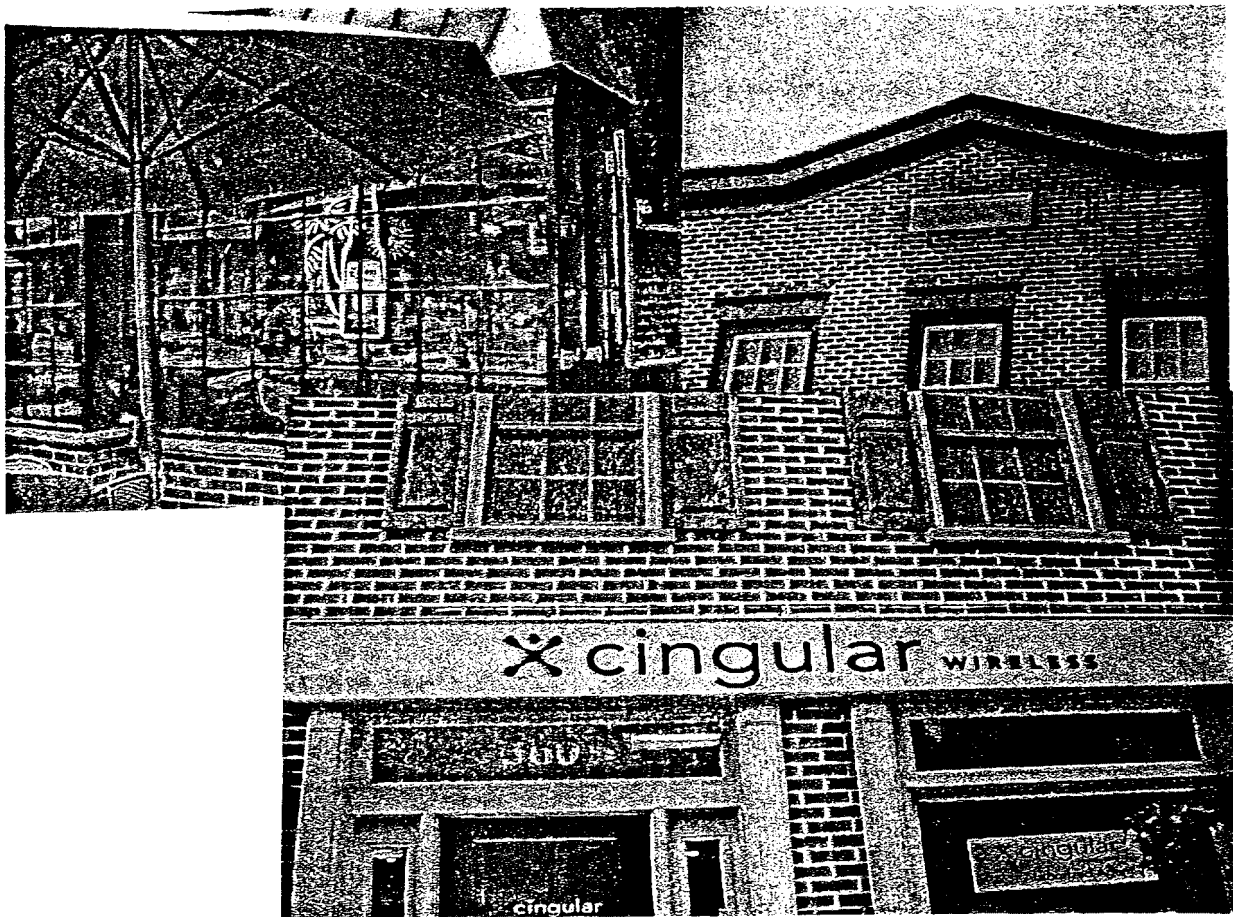
▪ **Doors:**

- Double-height entryways (those that span more than one STORY) are not allowed.
- Doors shall not be recessed more than 3 feet behind the shop-front windows and, in any case, shall have a clear view and path to a 45-degree angle past the perpendicular from each side of the door.
- Roll-down security gates and doors are prohibited.

F. Signage

INTENT AND GUIDING ILLUSTRATIONS FOR SIGNAGE

Signs along the **Columbia Pike Special Revitalization District's** commercial frontages should be clear, informative to the public and should weather well. Appropriate signage is desirable for advertising Columbia Pike shops and offices, and decoration. However, signage that is glaring or large creates a distraction, intrudes into and lessens the **Columbia Pike Special Revitalization District** experience, and creates visual pollution. The illustrations and statements on this page are advisory only. Refer to the Code standards below for the specific prescriptions of this section.



STANDARDS FOR SIGNAGE (WHERE CLEARLY VISIBLE FROM THE STREET)

General:

- Wall signs are permitted within the area between the second STORY floor line and the first floor ceiling, within a horizontal band not to exceed 2 feet in height. In no case shall this band be higher than 18 feet or lower than 12 feet above the adjacent sidewalk.
- Letters shall not exceed 18 inches in height or width and 3 inches in relief. Signs shall not come closer than 2 feet to an adjacent COMMON LOT LINE.
- Company logos or names may be placed within this horizontal band or placed or painted within GROUND FLOOR or second STORY office windows. Company logos or names shall not be larger than a rectangle of 8 square feet.
- A masonry or bronze plaque bearing an owner's or building's name may be placed in the building's cornice/PARAPET wall or under the EAVES, and above the upper STORY windows. Any such plaque shall be no larger than a rectangle of 8 square feet.
- STREET addresses may be placed at STREET entry doors using 6 inch tall, non-cursive type lettering. Such letters shall be between 6 feet and 10 feet above grade.
- Shop signs (not more than 18 inches vertical by 3 feet horizontal and minimum 9 feet clear height above the sidewalk) may be hung from an overhang or awning.
- Prohibited Signs: Billboards, canopy signs, marquees, any kind of animation, roof and painted window signs, and signs painted on the exterior walls of buildings are prohibited. No flashing, traveling, animated, or intermittent lighting shall be on the exterior of any building whether such lighting is of temporary or long-term duration. Portable or wheeled signs and advertising devices located outside any building are not allowed, pursuant to County regulations.

AWNINGS/Overhangs:

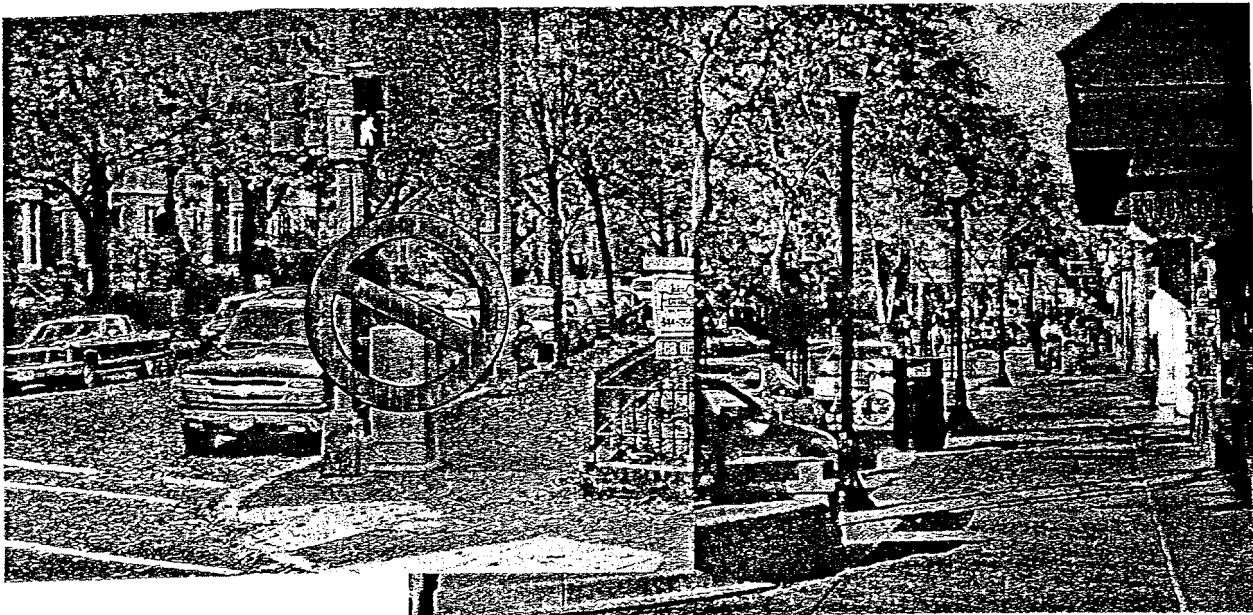
When an AWNING or overhang is incorporated into a building, the following requirements must be met:

- Minimum 10 feet clear height above sidewalk, minimum 6 feet depth out from the building façade (maximum to curb or tree-planting strip/furniture zone, whichever is closer).
- Canvas cloth or equivalent (no shiny or reflective materials), metal or glass.
- No internal illumination through the awning/overhang.
- Lettering on awnings limited to 5 inches tall on vertically hanging fabric at curb side of awning.
- No one-quarter cylinder configurations.

G. Lighting and Mechanical Equipment

INTENT AND GUIDING ILLUSTRATIONS FOR LIGHTING AND MECHANICAL EQUIPMENT

Materials and equipment chosen for lighting fixtures should be durable and weather well. Appropriate lighting is desirable for nighttime visibility, crime deterrence, and decoration. However, lighting that is too bright or intense creates glare, hinders night vision, and creates light pollution. The illustrations and statements on this page are advisory only. Refer to the Code standards below for the specific prescriptions of this section.



STANDARDS FOR LIGHTING AND MECHANICAL EQUIPMENT (WHERE CLEARLY VISIBLE FROM THE STREET)

Lighting:

- **STREET LIGHTS:** The "Carlyle" luminaire, or other STREET LIGHTS as the County specifies, shall be used within the Columbia Pike Special Revitalization District.
- **STREET lighting:** lights shall be located between 9 feet and 16 feet above grade with a maximum average spacing (per BLOCK face) of 60 feet on center located on the STREET TREE ALIGNMENT LINE or within the furniture zone on each side of the STREET and travel lanes (unless otherwise indicated on the REGULATING PLAN).
- At the front of the building, exterior lights shall be mounted between 6 feet and 14 feet above adjacent grade.
- All lots with ALLEYS shall have lighting fixtures within 5 feet of the ALLEY right of way. This fixture shall illuminate the ALLEY, shall be between 9 and 14 feet in height, and shall not cause glare in adjacent lots.
- Lighting elements shall be incandescent, metal halide, or halogen only. No HID or fluorescent lights (excepting compact fluorescent bulbs that screw into standard sockets) may be used on the exterior of buildings.
- Floodlights or directional lights (maximum 75-watt bulbs) may be used to illuminate ALLEYS, parking garages and working (maintenance) areas, but must be shielded or aimed in such a way that they do not shine into other LOTS, the STREET, or direct light out of the **Columbia Pike Special Revitalization District**.
- Floodlighting shall not be used to illuminate building walls (i.e. no up-lighting).
- Site lighting shall be of a design and height and shall be located so as to illuminate only the LOT. An exterior lighting plan must be approved as consistent with these standards by the ADMINISTRATIVE REVIEW TEAM.
- No flashing, traveling, animated, or intermittent lighting shall be visible from the exterior of any building whether such lighting is of temporary or long-term duration.
- Lighting for parking garages shall satisfy *Crime Prevention Through Environmental Design* (CPTED) standards.

Mechanical Equipment:

- The following shall be placed away from any RBL, not be stored or located within any STREET, and be screened from view from the STREET:

Air compressors, mechanical pumps, exterior water heaters, water softeners, utility and telephone company transformers, meters or boxes, garbage cans, storage tanks, and the like may not be stored or located within any area considered a STREET under this Code.

Mechanical Equipment (con't):

- Roof mounted equipment shall be placed away from the RBL and be screened from view from the STREET.

On-Street Bicycle Parking:

Bicycle racks (2-bike capacity) shall be installed on both sides of the STREET, along the STREET TREE ALIGNMENT LINE or within the furniture zone at no more than 60 foot intervals (not to interfere with the placement of STREET TREES or STREET LIGHTS) measured parallel to the street. At the time of development, the developer is only responsible for the installation of bicycle racks on the side(s) of the STREET being developed.

VII. Administration

The ***Columbia Pike Special Revitalization District Form Based Code*** process is intended to provide an incentive to property owners and developers who are willing to develop in a particular form. There are two review processes for the **Form Based Code** option: By-Right (administrative review) and Special Exception. The Special Exception process is dependent upon site size and/or the need for minor variations to the Code. Projects approved through the Special Exception process should nonetheless meet the intent of the **Form Based Code**.

Section 20 of the *Arlington County Zoning Ordinance* sets forth the provisions for reviewing and approving development applications within the **Columbia Pike Special Revitalization District**, as amended, where a landowner or developer chooses to develop pursuant to the **Form Based Code**. The intent is to ensure that all development occurring under the **Form Based Code** is consistent with the provisions of that Code as they pertain to height, siting, architectural standards, and building form. All five elements of the Form Based Code--**Definitions, the Regulating Plans, the Building Envelope Standards, the Streetscape Standards** and the **Architectural Standards**--will be applied during review.

The Columbia Pike Initiative ADMINISTRATIVE REVIEW TEAM, comprised of staff from the Department of Community Planning, Housing & Development, including planning and historic preservation; the Department of Public Works; and, Arlington Economic Development, is charged with review of all Form Based Code proposals.

A. By-Right Option

Projects on smaller sites (less than 40,000 square feet) are able to build as a matter of right when they meet all of the standards of the **Form Based Code**. The Columbia Pike Initiative ADMINISTRATIVE REVIEW TEAM will be responsible for reviewing development proposals within 30 days of submission of a completed application. Permits will not be issued for building activity until review is completed and a determination made that the proposal is consistent with the **Form Based Code**. Applicants also will be required to provide copies of their proposal to the *Columbia Pike Revitalization Organization* and affected civic associations at the time of submission to the County. Up to two civic association representatives, who will be identified from each adjacent neighborhood, will participate in any administrative review affecting their neighborhood.

B. Special Exception/Use Permit Option

The proposed Special Exception Use Permit process will be required for sites over 40,000 square feet or with floorplates over 30,000 square feet. Such sites will be required to meet the intent of the Code and will be evaluated in terms of how well they conform to the Code and meet other objectives of the *Columbia Pike Initiative—A Revitalization Plan*. The Use Permit process also provides the opportunity for community input as well as fine tuning of a development proposal to address issues that may not have been contemplated by the **Form Based Code**.

The Use Permit process will give the opportunity for appropriate deviations from the Code that are consistent with the County's goals and plans to revitalize Columbia Pike as detailed in the Columbia Pike Initiative that was recently adopted by the County Board. Examples of these deviations may include problems related to topography or STREET grade, the location of ALLEYS and STREETS, breaks and passages between buildings, signs, STREETSCAPE details, design issues related to the inclusion of existing buildings or mature trees as part of a development proposal. Where properties of less than 40,000 square feet have such difficulties, they too, could seek a use permit to gain approval of their development with needed variations.

As currently proposed, the Special Exception process would take approximately 55 days from acceptance of a completed application to public hearing by the Planning Commission and County Board. Applicants will be required to provide copies of their application to the *Columbia Pike Revitalization Organization* and all affected civic associations at the time of submission to the County. Applicants also will be required to perform property owner notification (affected, abutting and owners across the street) as required by the *Code of Virginia*. At the time an application is received, a Planning Commission representative will be designated and civic association representatives from the affected neighborhood will be contacted to begin coordinating community input on the project.



Managing Maryland's Growth

**Models and Guidelines for Infill
Development**

Maryland Department of Planning

Parris N. Glendening, Governor

Roy Kienitz, Secretary

October 2001

Contact Information

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Maryland Department of Planning

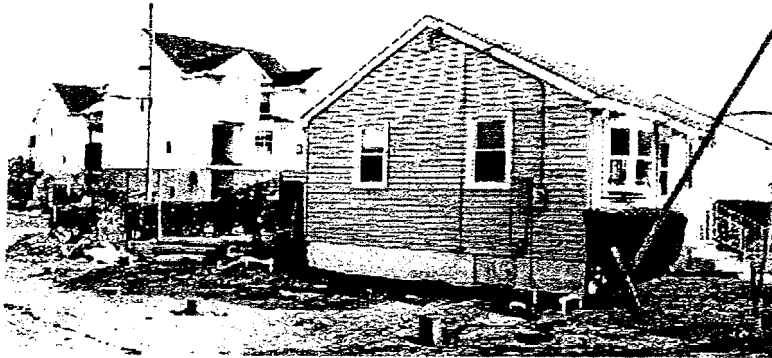
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NEW STRUCTURES BUILT BEHIND SMALLER VERNACULAR HOMES IN CAPE MAY, N.J.

Three story townhouses in the background threaten to become the dominant building type, overshadowing these small vernacular homes, pitting pressure for more expensive dwellings against a greater range of housing options.

V. Model Infill Ordinance

Jurisdictions may adopt the following model infill ordinance, craft it to fit their particular needs, or identify an alternative approach to supporting infill. The appendix contains additional ordinance language such as parking guidelines, accessory units and live/work provisions, which may be 'plugged in' to the model ordinance as jurisdictions see fit. Local governments may already have regulations that support infill and require little or no modification in order to qualify for the incentives. The State does not require local jurisdictions to adopt the model Infill Ordinance.

This model is intended for use in residential areas and also provides for commercial and mixed use infill development. It may also be applied to situations where demolition has created opportunities for existing structures to be replaced with new construction, or where new street patterns can seamlessly be integrated with existing adjacent communities.

Section 1: INTENT

It is the general intent of this Ordinance to:

(OTHER STATEMENTS OF INTENT MAY BE SUBSTITUTED HERE)

- 1) Accommodate growth in (NAME OF LOCAL JURISDICTION) by encouraging and facilitating new development on vacant, bypassed and underutilized land within areas that already have infrastructure, utilities, and public facilities, while addressing the needs of (NAME OF JURISDICTION) residents.
- 2) Encourage efficient use of land and public services in the context of existing communities.
- 3) Stimulate economic investment and development in older established communities.
- 4) Provide developers and property owners flexibility so that they can achieve high quality design and develop infill projects that strengthen existing communities.
- 5) Create a high quality community environment that is enhanced by a balanced compact mix of residential, commercial, recreational, open space, employment and institutional uses and building types.
- 6) Implement the goals, objectives, and policies of the comprehensive plan, or the small area plan.
- 7) Improve approval certainty for infill development by providing clear development standards.
- 8) Encourage compact development that is pedestrian-scaled and, if applicable, transit-oriented.

Section 2: GENERAL REQUIREMENTS

General: The site plan shall incorporate the following elements to enhance compatibility with the surrounding community:

- (1)
 - (a) Sidewalks that connect to the adjacent sidewalk system;
 - (b) Public streets that connect to the adjacent street pattern;
 - (c) Preservation of architecturally significant structures whenever feasible;
 - (d) Inclusion of, or relationship to, civic spaces;
 - (e) Street furniture, lighting and landscaping that is primarily oriented to pedestrian use; and
 - (f) Setbacks, building envelopes, use and parking compatible with surrounding community.
 - (g)
- (2) All new buildings (except accessory structures) shall have the primary entrance oriented to the street or public walkway, with direct, barrier-free and convenient pedestrian connections.

Section 3: PERMITTED USES

General: (CERTAIN TYPES) of uses and building types are allowed, including accessory dwellings and accessory buildings if they are consistent with the comprehensive plan.

Residential (EXAMPLE FOR ACCESSORY DWELLINGS AND HOME OCCUPATIONS)

- (1) One Accessory dwelling unit per lot may be allowed in addition to the principal dwelling unit.
- (2) Home occupations are allowed if the use is clearly incidental and secondary to the use of the dwelling for residential dwelling purposes, and does not change the residential character of the dwelling.

Commercial/Employment (EXAMPLE FOR LIVE/WORK UNITS)

- (1) Commercial/employment may be mixed vertically or horizontally with residential. First floor space (Live/work units) restricted to non-residential use in areas of predominantly commercial use.

Institutional/Civic/Public uses are permitted for not-for-profit uses.

Mixed Use may include dwelling types and uses other than what is permitted in the underlying zone by right, subject to consistency with the comprehensive plan. Mixed use should be planned for in the context of existing walkable amenities in the neighborhood.

- (1) Residential uses are the predominant element, unless the project plan demonstrates how the development contributes to and strengthens the overall mix of uses of the surrounding neighborhood.
- (2) Residential uses can be mixed vertically with commercial/employment, including single structure Live/work units.

Section 4: DEVELOPMENT STANDARDS

General: Density, design, materials, use and scale should reflect local style, climate, heritage and materials unique to (NAME OF LOCAL JURISDICTION).

- (1) Density: may exceed the underlying zone (BY xx UNITS PER ACRE) for the purpose of creating a neighborhood having a variety of housing types.
 - (a) Total number of dwelling units as well as location to be established at the time of preliminary plan approval.
 - (b) Lot Size. Lot areas established in the preliminary plan shall be dependent on proposed densities, floor area ratios, setbacks, building heights and community compatibility.
 - (i) Existing Small Lot Amnesty. A legal lot of record that existed prior to the date of this

- Ordinance, may use Infill Ordinance minimum buildable lot standards.
- (ii) Minimum Buildable Lot Standards. See sample Ordinance language in Appendix B.
- (2) **Building Height.**
- (a) Buildings restricted to (X) stories or (XX) feet in height, or the average of adjacent buildings.
 - (i) Heights allowed by right or by special exception in the underlying zone.
 - (ii) If greater than the allowed maximum, the proposed building or structure must meet the following criteria for community compatibility:
 - 1. Neighborhood scale
 - 2. Privacy
 - 3. Light and shadow
 - 4. Views
 - 5. Architectural compatibility
- (3) **Building Setback.**
- (a) Setbacks as allowed by right in the underlying zone.
 - (b) Contextual setback option. May use an average of the setbacks of adjacent or abutting lots.
- (4) Bulk and Scale shall be similar to and consistent with the surrounding neighborhood as evaluated by the bulk of buildings adjacent, abutting and surrounding the proposed development. Larger buildings should be designed to adhere to the existing architectural pattern of the surrounding neighborhood.
- (5) Flexible development standards to reduce lot areas, widths and yards and to increase building heights may be permitted for infill developments at the discretion of the approving agency(s), subject to proof of good cause and benefit to the development and community, to encourage a variety of land uses, and to address difficult sites which incorporate infill and redevelopment or rehabilitation. Building height and coverage may vary so long as the project average is consistent with the neighborhood scale and architectural rhythm and does not constitute a disruptive condition in the identity of the area (See Section 5).

Section 5: COMPATIBILITY STANDARDS

General: Provides exemplary site design, architectural design and high quality materials that are compatible with, and does not negatively alter the character of, the existing neighborhood.

- (1) All permitted uses conform to the purposes of the Ordinance (Section 1) and are compatible with uses, existing or proposed in the comprehensive plan in the general vicinity of the proposed development. The following requirements shall apply:
 - (a) Building Size, Height, Bulk, Mass, Scale. Similar in height and size or articulated and subdivided into massing that is more or less proportional to other structures in the area, and maintains the existing architectural rhythm.
 - (b) Building Orientation. Primary facades and entries face the adjacent street with a connecting walkway that does not require pedestrians to walk through parking lots or across driveways.
 - (c) Privacy. Optimize privacy of residents and minimize infringement on the privacy of adjoining land uses by considering the placement of windows and door entrances. Create opportunities for interactions among neighbors in common pedestrian circulation areas of the project.
 - (d) Building Materials shall be similar to materials of the surrounding neighborhood or use other characteristics such as scale, form, architectural detailing, etc. to establish compatibility.
- (2) All planned uses, building types, and landscaping will be included on the preliminary plan and will demonstrate the relationships of the proposed development with existing offsite development in the context of the adjacent community. Compliance with these requirements shall in and of itself be deemed to create a presumption of compatibility.

Section 6: OPEN SPACE and LANDSCAPING

General: All open space, recreational amenities and landscaped areas shall be shown on the plan.

Open space. Infill development shall provide common public open space, if planned, except as follows:

- (1) Proximity to public park. An open space credit may be granted if a project is connected to, and located

within ¼ mile of, an improved public park by a continuous public sidewalk.
Landscaping. Natural vegetative features and existing trees shall be incorporated into the site design if practicable. Long term management and maintenance plans for natural areas, street trees, and common open space shall accompany the project.

Section 7: PUBLIC FACILITIES and UTILITIES

General: Existing and planned public facilities should be shown on the plan.

- (1) All public streets, walkways and alleyways shall be shown on the plan. All through streets and walkways must be public. The local street and walkway system shall be safe, efficient, convenient, attractive and shall accommodate use by all segments of the population.
 - (a) The street and walkway system provides multiple, direct and continuous intra and inter-neighborhood connections between destinations.
 - (b) The street network shall include sidewalks on both sides of the street.
 - (c) Closed street systems are prohibited, but short 'keyhole' cul-de-sacs that connect to the main grid system are allowed when consistent with the surrounding community.
 - (d) Street widths should be consistent with the surrounding community and sized to promote walkability and multi-modal use.
- (2) Roads, lighting, sidewalks, street furniture, utilities and other public facilities should enhance pedestrian circulation.

Section 8: PARKING

General: Flexibility for the number of parking spaces shall be considered if the project is pedestrian-oriented and serviced within ¼ mile by a transit stop.

- (1) Parking for private automobiles is provided based on safety, convenience, pedestrian and vehicular circulation, and proximity of public parking and public transportation.
- (2) The parking plan may provide a combination of off-street and on-street spaces. On-street parking is encouraged.
- (3) Shared parking is encouraged.
- (4) Sub-grade single garages may be allowed at the front of the building subject to local design standards.
- (5) As is practicable, at-grade off-street parking areas should be located at the rear of the dwelling, with alley access.
- (6) All parking spaces shall be shown on the site plan.
- (7) Bicycle spaces shall be provided for commercial/employment and mixed-use projects.
- (8) Parking requirements can be waived where ample public parking is available in close proximity.

Section 9: FINDINGS REQUIRED

The jurisdiction shall approve the plan upon finding that:

- (1) The plan accomplishes the purposes, objectives and minimum standards and requirements of the overlay;
- (2) The plan is in accord with the area master plan;
- (3) The plan is internally and externally compatible and harmonious with existing and planned land uses in the area;
- (4) Existing or planned public facilities are adequate to service the proposed development;
- (5) The development staging program is adequate in relation to the provision of public facilities and private amenities to service the proposed development; and
- (6) The plan is consistent with the purposes and provisions of the smart growth areas act and other applicable Smart Growth legislation.

Section 10: PROCEDURES FOR AMENDMENT

<<TO BE DEVELOPED AS NEEDED>>



November 2004

ATTACHMENT 1 C

Form First

The New Urbanist alternative to conventional zoning.

By Peter Katz

"Just throw your existing zoning in the garbage."

That's what New Urbanist architect-planner Andres Duany exhorts audiences to do in his lectures about the decline of America's suburbs.



When I first heard Duany express this view in the early 1990s, I was taken aback, as, I'm sure, most planners were. It seemed outrageous to suggest that zoning, the body of law that controls development in 99 percent of America's communities, could be so easily dismissed.

Since then, however, I've come to believe that Duany's prescription may not be so radical after all. His main point is that conventional zoning based on the segregation of land uses was never intended to deal with physical form, and that the "band-aid" measures (including design guidelines) that planners cobble onto existing ordinances to address this deficiency just make matters worse. Something else is

needed, and that something else is what New Urbanists call form-based coding.

What is it?

As its name suggests, form-based coding seeks to regulate the *form* of the built environment. In contrast, conventional zoning primarily seeks to control land use and density, but is largely silent on matters of form beyond the most basic height, floor-area, and setback limits for individual buildings.

The new approach builds on the idea that physical form is a community's most intrinsic and enduring characteristic. It seeks to codify that form in a straightforward way so that planners, citizens, developers, and other stakeholders can move easily from a shared physical vision of a place to its built reality.

To understand the concept, think of the way neighborhoods change over time. In many cities, warehouse and industrial areas have morphed into trendy arts districts with galleries and restaurants at street level and loft housing above. The form of the buildings has remained fairly constant, while internal uses and activity patterns have been transformed.

Under the current, use-based zoning system, such a change would be considered drastic. The land-use category has gone from industrial, at one end of the spectrum, to residential, at the other, although to the average onlooker, the place looks pretty much the same. In this example, a form-based code would regulate the part that had remained the same — the form of the building and the configuration of the street and sidewalk. Use would be regulated, too, but at a secondary, rather than primary level of the code.

In some cities, planners have found ways to bend land-use zoning to enable this kind of reuse to promote the revitalization of older neighborhoods, particularly those with good architectural "bones." But such modifications are typically made on a case-by-case basis or within narrowly defined special districts.

Meanwhile, in new growth areas and in most existing neighborhoods, use-based zoning remains the law of the land. One result is the suburbanization of city neighborhoods by provisions such as setback rules that force houses far back on their lots and away from each other.

Getting down to work

65

Generally, the creation of a form-based code is interwoven with a community visioning process. The process typically includes a public design workshop, or charrette, lasting several days. The community's "consensus vision" is conveyed through a range of visuals, including perspective drawings, site analysis diagrams, and an illustrative plan. That plan, which resembles an aerial photo, includes proposed buildings (shown as rooftops), key natural features, and existing and planned public spaces.

The first step in coding is to translate the illustrative plan into a more diagrammatic regulating plan, which indicates what goes where. This document, while similar in some ways to a zoning map, is far more detailed. It also omits any direct labeling of uses, a job that is handled in the building standards described below.

In one kind of form-based code, the regulating plan assigns a building type or types to each available parcel of land. Other kinds of regulating plans indicate a range of building or frontage types that may be constructed in a certain area.

Clearly, when it comes to detailing the urban environment, one size does not fit all, and the new approach to coding recognizes that. Coding by building type provides the freedom to create one set of rules for one building type and another set for a different type. For example, a townhouse may function best with its main floor lifted a half-level above grade for interior privacy, with a front stoop for access. Yet a shopfront in the same neighborhood may be more accessible to customers if it is set at grade.

Although public buildings are very important to New Urbanist designers, they are typically not coded. Such buildings are usually indicated in the regulating plan by a conceptual footprint that serves as a placeholder until an actual design is formulated (often years in the future).

Nuts and bolts



The physical characteristics of each building type are summarized in the building standards — a set of annotated building cross-sections and plan diagrams assembled on a single, letter-size sheet. In some cases, all the building types are combined into a matrix and formatted as a poster.

Regardless of layout, building standards typically establish these parameters:

Building height is a key standard. A maximum number of floors (or dimension-to-the-eave) is set to ensure that a building does not overwhelm its neighbors. Unlike use-based zoning, form-based codes also specify a minimum height in order to maintain a proper street wall.

Siting standards control the placement of structures in relation to fronting streets and adjacent building lots. Dimensions to front, side, and rear building lines, as well as the location and configuration of entrances, parking, yards, and courtyards are specified. Key building elements — i.e., windows, doors, and porches — are also controlled by the standards.

Uses are also part of the building envelope standards, but the approach here is quite different from conventional zoning. Permissible uses, stated in general terms (e.g., retail, residential), are identified for each building type and labeled on the cross-section diagram.

This approach makes it easy to assign different uses to each floor of a mixed-use development, and avoids the problem of trying to communicate the same information on a flat map. (The plethora of colors, stripes, and cross-hatch patterns on most zoning maps shows how confusing this can be.)

Thoroughfare standards for a range of recommended street types may also be part of the code in places where streets are not individually designed. Such standards are indicated by section diagrams with dimensions for travel and parking lanes, sidewalks, medians, and planting strips. Tree alignment and property lines are also shown.

Finally, many codes include a set of landscape standards listing appropriate tree and groundcover species. Most codes also provide a glossary that defines terms that are used in a specific way in the document.

These components constitute the basics of a form-based code. They control the urban design elements that New Urbanists are most concerned with. However, some communities — master-planned developments, special retail districts, historic districts, among others — may want to exercise a higher level of control over the appearance of individual buildings. For this reason, some form-based codes include architectural standards.

This optional "dress code" controls exterior colors, materials, and construction techniques. Particular emphasis is given to cladding, doors, windows, stairs, and roofs. Style may also be included as part of the architectural standards, but not in every case. Many New Urbanists choose to avoid direct references to building style, fearing that too much specificity will lead to an overly homogeneous, "themed" look.

A little history

While the term form-based coding has only recently emerged, the technique has been used for over 20 years. Andres Duany's Miami firm, Duany Plater-Zyberk & Company, first applied the approach in its 1982 code for Seaside, the highly publicized coastal resort town on Florida's panhandle.

The firm's principals, Duany and his wife, Elizabeth Plater-Zyberk, initially set out to design all the town's buildings themselves. But once the true scale of the project became evident, they realized that such a high level of design control would not be possible, or even desirable. Instead, they handed off the design responsibility to the lot purchasers, or their architects. That decision led to a new challenge — finding a way to impart a distinctive character to specific areas within the development.

On study trips to historic Southern communities, the design team saw that certain building types tended to dominate in certain parts of a town: shopfronts on the main square, rowhouses on side streets, and mansions flanking Main Street just beyond the edges of the downtown. The team also noted that, while building types were fairly consistent in a given area, there was always enough variety within the design of each building to avoid a cookie-cutter look.

The first Seaside code established a hierarchy of seven (later expanded to eight) "classes" of buildings for use in the new community. Each class was based on a traditional Southern vernacular building type. The code specified the rudimentary physical characteristics of each class, controlling siting on the lot, building height, location of porches and outbuildings, and how parking should be handled.

The code progressed through a number of iterations, achieving its near-final form during an on-site design charrette in 1981. Shortly after that event, several architecture professors at Washington, D.C.'s Catholic University conducted a test of the code. They asked 140 students to design and build models of every building included in the 80-acre master plan according to the rules set forth in the code. The students then combined their individual creations into a 16-foot-long composite model of the community.

Looking at the finished product, one could easily envision the town's streets and public spaces. The model also assumed an important diagnostic role. Recognizing the tendency of architecture students to push the design of each building to its limits, the code's creators were able to identify and fix a number of potential regulatory problems before the code was formally adopted.

After the firm's experience at Seaside, Duany Plater-Zyberk adapted form-based codes to work within the legal framework of a planned-unit development. The Kentlands in Gaithersburg, Maryland, is one early example of that application. Since 1989, when its plan and code were created in a highly publicized charrette, DPZ has crafted similar documents to regulate the buildout of over 200 new and existing communities.

Broadening the circle

Other urban designers have since used form-based codes in a wide variety of projects and locations. In 1999, Dover, Kohl & Partners of South Miami, working in collaboration with DPZ, prepared a master plan and form-based development ordinance for a new downtown for Kendall, an edge city just south of Miami.

The 240-acre project site is adjacent to two commuter rail stations and a state highway.

Since the adoption of the ordinance, an estimated \$250 million in new construction permits have been issued. Some 3,400 new dwelling units, most in high-rise buildings (up to 25 stories), are now under construction in an area that previously had no residential population at all. While the recent wave of construction in Kendall was foreseen well before the code was adopted, many credit the regulations with helping the community to achieve a true downtown development pattern rather than the patchwork typical of booming suburban areas.

On the East Coast, Dover Kohl and Ferrell Madden Associates of Washington, D.C., conducted an eight-day charrette that resulted in the adoption in February 2003 of a plan and form-based code for the Columbia Pike Corridor in Arlington, Virginia. That work focused on the detailed design of four mixed-use centers along a 3.5-mile section of the historic corridor, which is minutes away from the Pentagon and downtown Washington.

A year later, Arlington County planners approved Columbia Station, a mixed-use development consisting of 257 housing units above 42,000 square feet of street-fronting retail. Future plans call for the integration of bus rapid transit or light rail along the corridor.

Geoffrey Ferrell of Ferrell Madden was also responsible for the form-based coding of a \$200 million, mixed-use development in Contra Costa County, California. For two decades, neighborhood opposition had stalled the proposed public-private venture on a 20-acre site adjacent to the Pleasant Hill station on the Bay Area Rapid Transit line. The plan for this project was developed by Lennertz Coyle & Associates of Portland, Oregon.

The code, and the elaborate public involvement that led up to it, created a level of trust that led to approval of the project in December 2001. The project is now moving forward under the direction of architect Dan Parolek, of Opticos Design in Berkeley, California.

Stephen Lawton, the community development director of Hercules, another Contra Costa County community, credits the streamlined nature of form-based coding with helping the city to deal with a backlog of development proposals. Dover Kohl & Partners' Central Hercules plan is shaping several new mixed-use neighborhoods on a patchwork of brownfield sites.

Says Lawton: "The clarity of the form-based code made it easy for citizens to understand the development proposals and to accept the intensity of growth needed to achieve financial stability. This was something we'd never have been able to achieve with conventional zoning."

To date, most form-based codes have been crafted individually in response to the needs of a specific community or site. Now comes a new generation of standardized form-based codes, which are derived from the SmartCode, a template developed by DPZ and licensed by the Municipal Code Corporation in Tallahassee, Florida.

The SmartCode template defines a series of preconfigured (but customizable) zones based on the "transect" — a framework for organizing a metropolitan area into a series of zones, ranging from most natural to most urban.

One of the first communities to take this new approach is Petaluma, California, which adopted a variation of the SmartCode in July 2003. Laura Hall of Fisher & Hall Urban Design in Santa Rosa and Paul Crawford, FAICP, of Crawford Multari & Clark in San Luis Obispo tailored the document to the city's needs; it focuses on a 400-acre portion of the downtown.

According to Hall, Petaluma adopted the code in just nine months, after a seven-year effort to complete and adopt a more conventional, use-based downtown plan and zoning ordinance. Over \$100 million in development has been approved since the code's adoption, she says.

California out front

As more communities begin to incorporate New Urbanist and smart growth principles into their planning strategies, the practice of form-based coding is likely to spread.

How much that will happen depends on several factors: the availability of qualified consultants (just a handful of firms practice true form-based coding); the dissemination of knowledge about the technique (little has been written on the subject, and there are few places to learn about it); and a continuing legal concern about overly prescriptive design guidelines that are often mistaken for form-based codes.

The good news is that the state of California recently included an endorsement of form-based coding in its general plan guidelines. The document refers to the code as a "useful implementation measure for achieving certain general plan goals, such as walkable neighborhoods and mixed-use and transit-oriented development." And this summer, Gov. Arnold Schwarzenegger signed Assembly Bill 1268, making California the first state to specifically enable the practice of form-based development regulation.

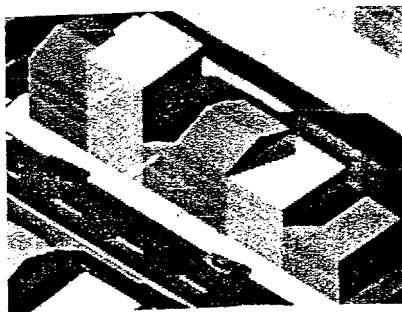
The bill's language is brief and to the point: "The text and diagrams in the land use element [of the general plan] that address the location and extent of land uses, and the zoning ordinances that implement these provisions, may also express community intentions regarding urban form and design. These expressions may differentiate neighborhoods, districts, and corridors, provide for a mixture of land uses and housing types within each, and provide specific measures for regulating relationships between buildings and outdoor public areas, including streets."

As states such as Florida and Arizona follow California's lead in mandating local planning through the use of a general plan, zoning consistent with the plan, and the use of specific plans, one can hope that the practice of form-based coding and the enabling laws that support it will not be far behind.

Peter Katz is a consultant on New Urbanist implementation and development who is based in Alexandria, Virginia. He teaches planning at Virginia Tech's Alexandria campus and is the author of The New Urbanism: Toward an Architecture of Community, published by McGraw-Hill in 1993.

FBCs: The Advantages

Because they are prescriptive (they state what you want), rather than proscriptive (what you don't want), FBCs can achieve a more predictable physical result. The elements controlled by FBCs are those that are most important to shaping a high-quality built environment.



FBCs encourage public participation because they allow citizens to see what will happen where — leading to a higher comfort level about greater density, for instance.

Because they can regulate development at the scale of an individual building or lot, FBCs encourage independent development by multiple property owners. This eliminates the need for large land assemblies and the megaprojects that are frequently proposed for such parcels.

The built results of FBCs often reflect a diversity of architecture, materials, uses, and ownership that can only come from the actions of

many independent players operating within a communally agreed-upon vision and legal framework.

FBCs work well in established communities because they effectively define and codify a neighborhood's existing "DNA." Vernacular building types can be easily replicated, promoting infill that is compatible with surrounding structures.

Nonprofessionals find FBCs easier to use than conventional zoning ordinances because they are much shorter, more concise, and organized for visual access and readability. This feature makes it easier for nonplanners to determine whether the codes have been complied with.

FBCs obviate the need for design guidelines, which are difficult to apply consistently, offer too much room for subjective interpretation, and can be difficult to enforce. They also require less oversight by discretionary review bodies, leading to a less politicized planning process that can deliver huge savings in time and money and reduce the risk of takings challenges.

The stated purpose of FBCs is the shaping of a high-quality public realm (a presumed public good) that, in

turn, promotes healthy civic interaction. For that reason, the codes can be enforced not on the basis of aesthetics but because noncompliance would diminish the good that is sought.

While enforceability of development regulations has not been a major problem in new growth areas where aesthetic concerns are usually addressed in private covenants, such matters have created problems for local governments in already-urbanized areas. Because they have the potential to level the regulatory playing field between city and suburb, form-based codes could play a major role in the recovery of vast areas of America's urban landscape.

Resources

Images: Top — In Iowa City's Peninsula Neighborhood, the code requires sidewalks and minimum-width front porches in a effort to create a pedestrian-friendly community. Photo by Paul Warchol. Middle — Townhouses in the Pleasant Hill development define the walls of a "public room" focused on Mount Diablo. Citizens supported the redevelopment plan in part because of the generous provisions of open space. Illustration by LCA Associates. Bottom — The row of storefronts, with lofts above, seen in the computer simulation, shows the results of following an FBC's build-to line in a Chicago neighborhood. Illustration by Urban Advantage.

For more information on form-based codes, go to www.formbasedcodes.org. This website has been created by FBCA, an alliance of form-based coding practitioners recently convened to set standards for and disseminate information about the technique.

Examples of early form-based codes can be found in *The New Urbanism: Toward an Architecture of Community* by Peter Katz (McGraw-Hill 1993) on pages 76-77, 94, 110-116, 141.

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